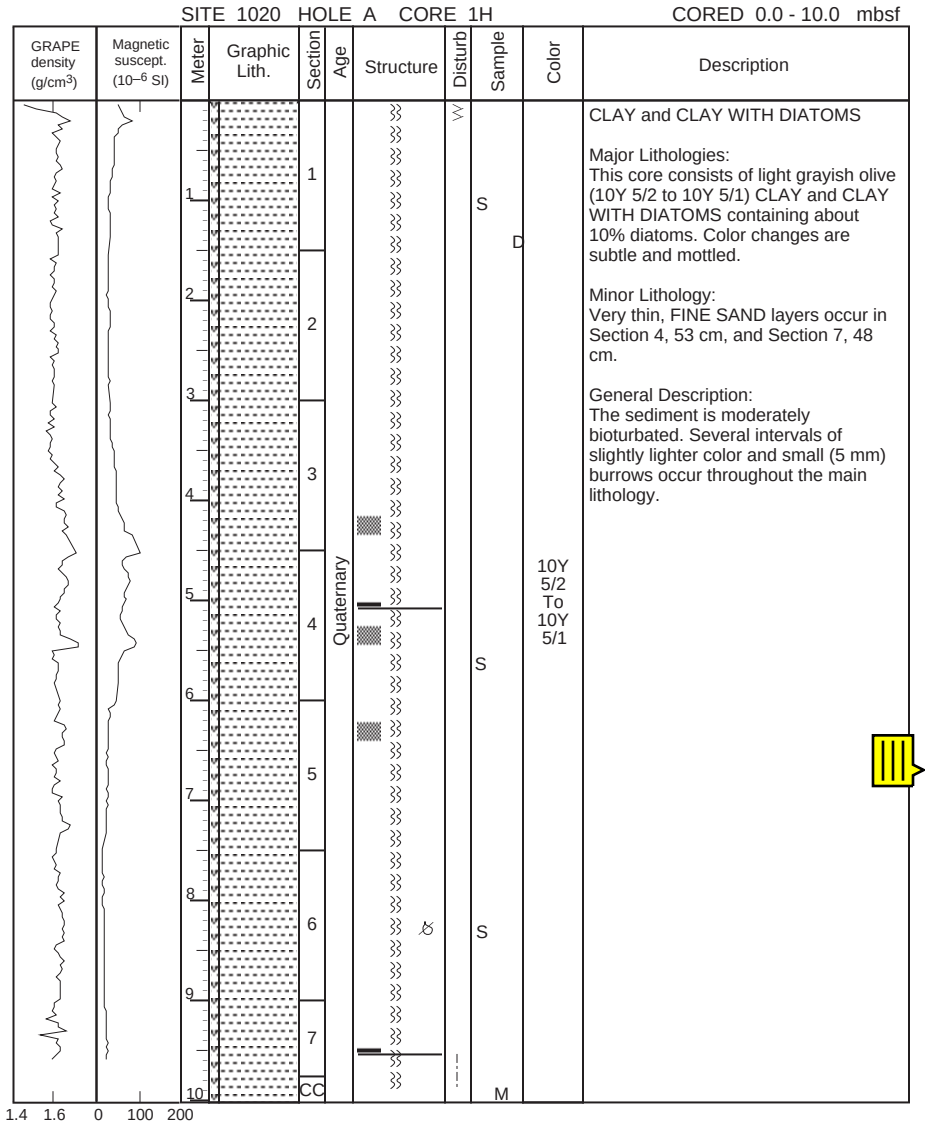


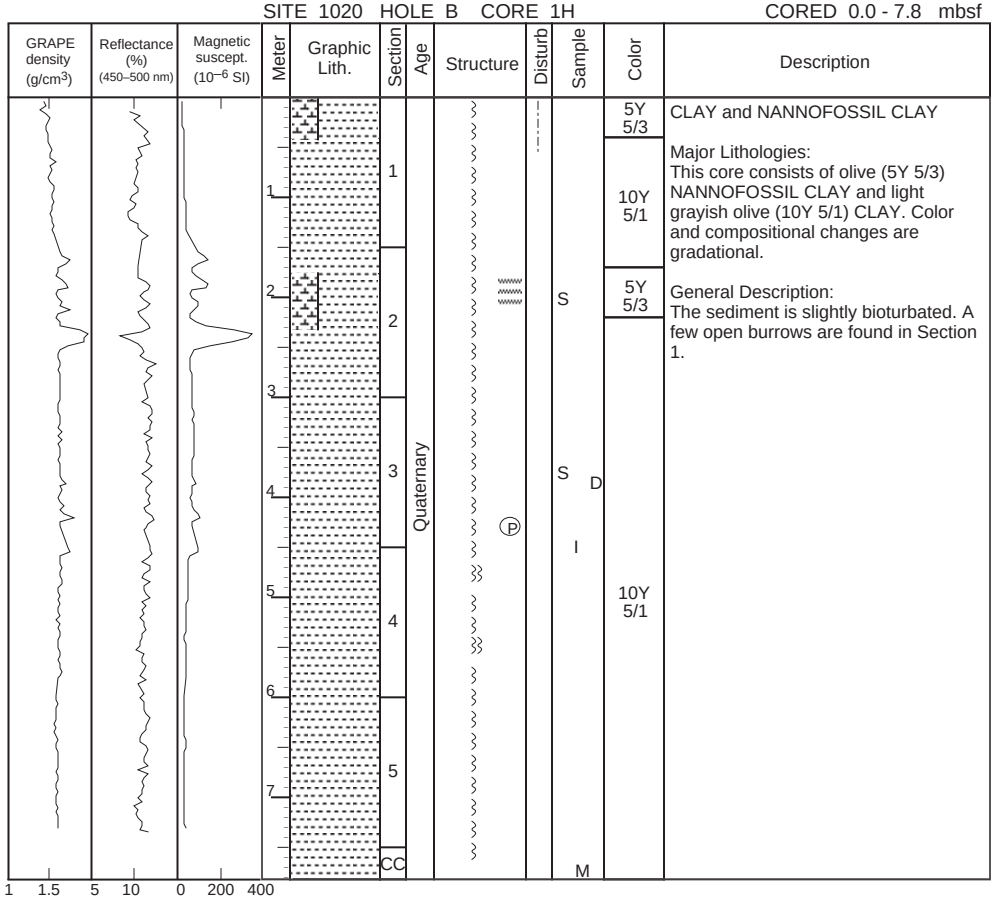
CLAY and CLAY WITH DIATOMS

Major Lithologies:
This core consists of light grayish olive (10Y 5/2 to 10Y 5/1) CLAY and CLAY WITH DIATOMS containing about 10% diatoms. Color changes are subtle and mottled.

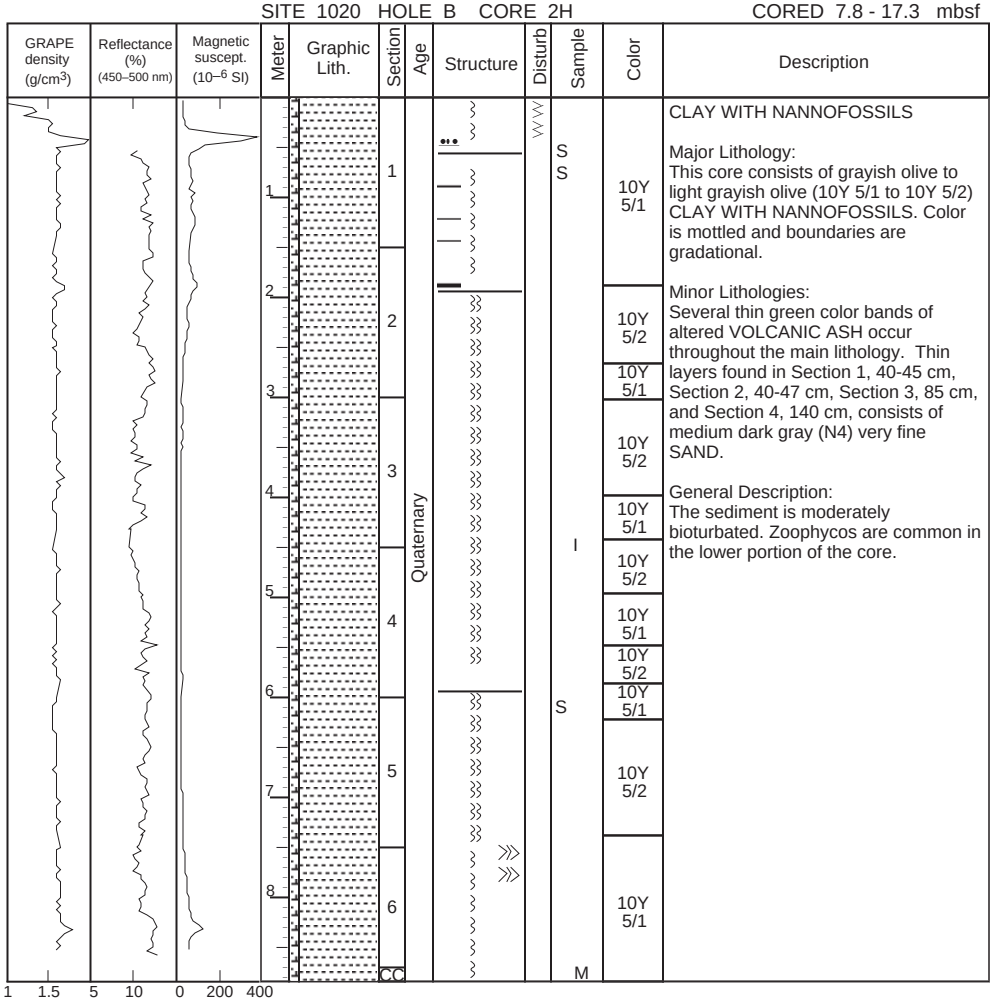
Minor Lithology:
Very thin, FINE SAND layers occur in Section 4, 53 cm, and Section 7, 48 cm.

General Description:
The sediment is moderately bioturbated. Several intervals of slightly lighter color and small (5 mm) burrows occur throughout the main lithology.

SITE 1020 HOLE B CORE 1H CORED 0.0 - 7.8 mbsf



SITE 1020 HOLE B CORE 2H CORED 7.8 - 17.3 mbsf



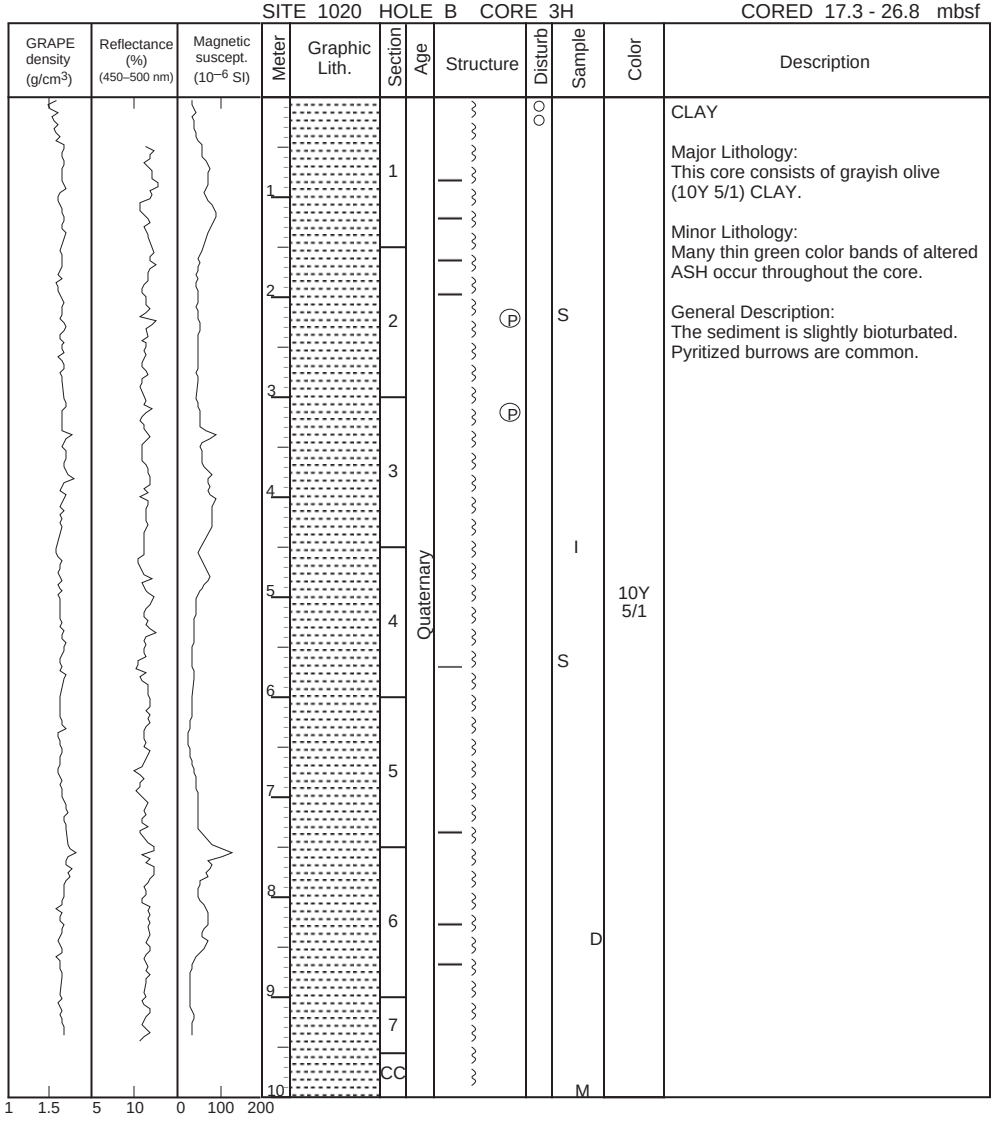
CLAY WITH NANNOFOSSILS

Major Lithology:
This core consists of grayish olive to light grayish olive (10Y 5/1 to 10Y 5/2) CLAY WITH NANNOFOSSILS. Color is mottled and boundaries are gradational.

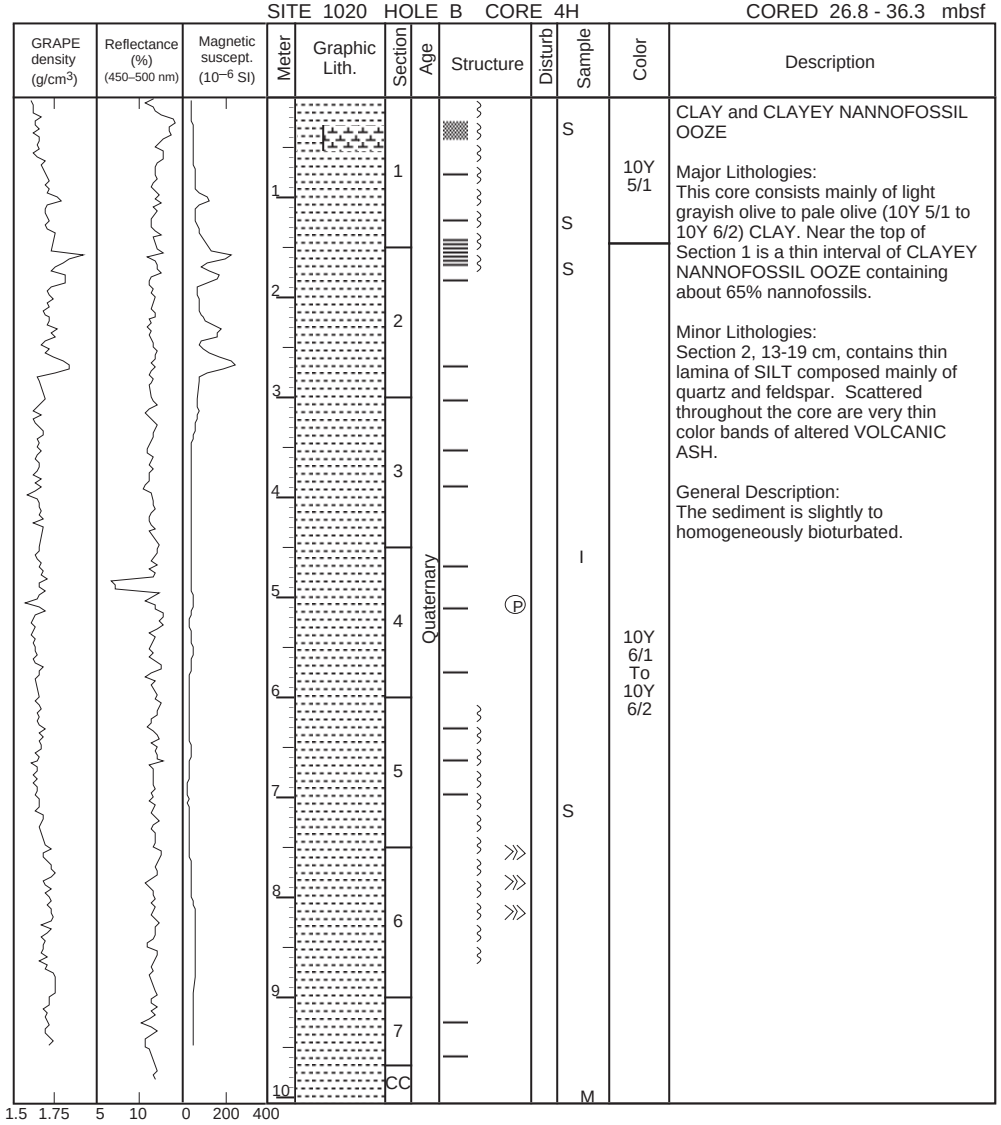
Minor Lithologies:
Several thin green color bands of altered VOLCANIC ASH occur throughout the main lithology. Thin layers found in Section 1, 40-45 cm, Section 2, 40-47 cm, Section 3, 85 cm, and Section 4, 140 cm, consists of medium dark gray (N4) very fine SAND.

General Description:
The sediment is moderately bioturbated. Zoophycos are common in the lower portion of the core.

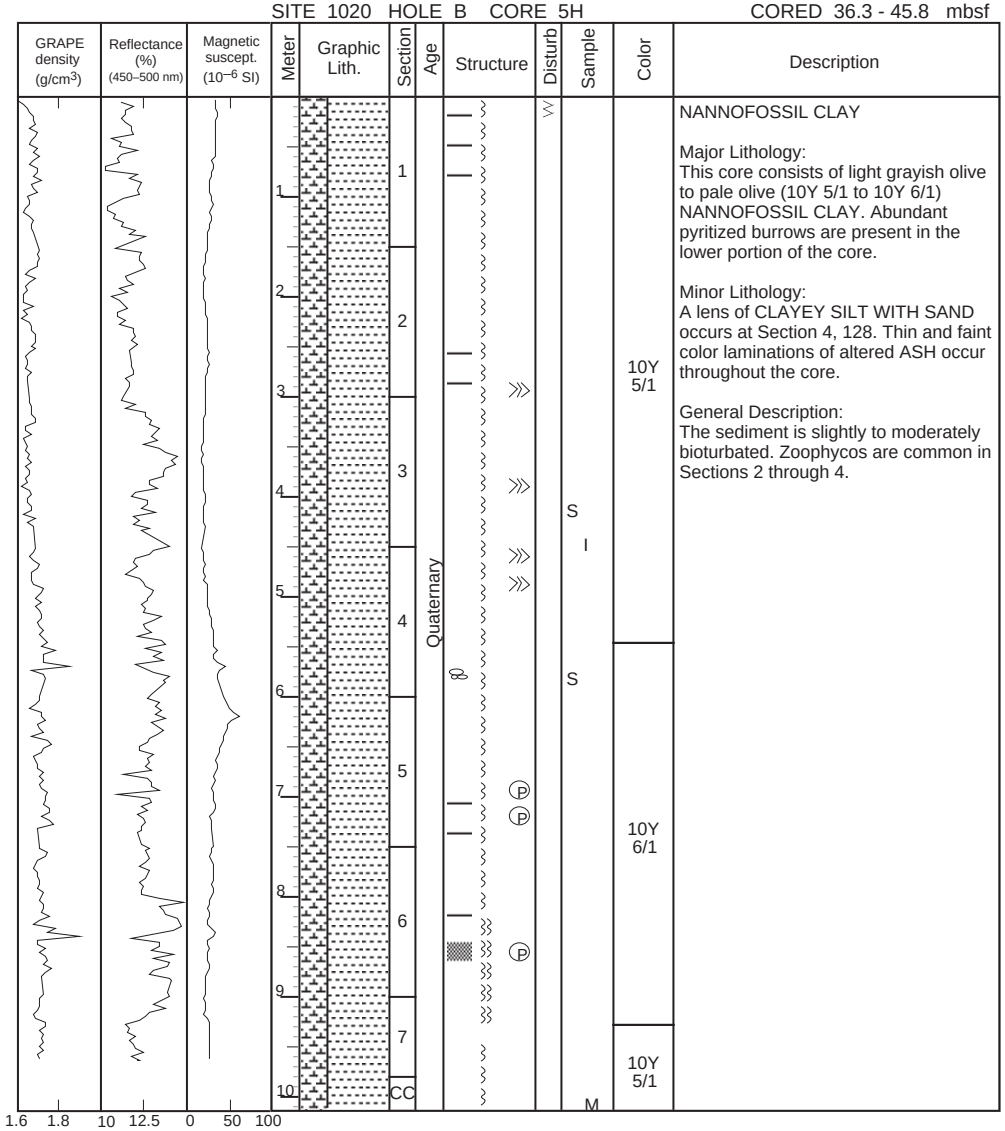
SITE 1020 HOLE B CORE 3H CORED 17.3 - 26.8 mbsf



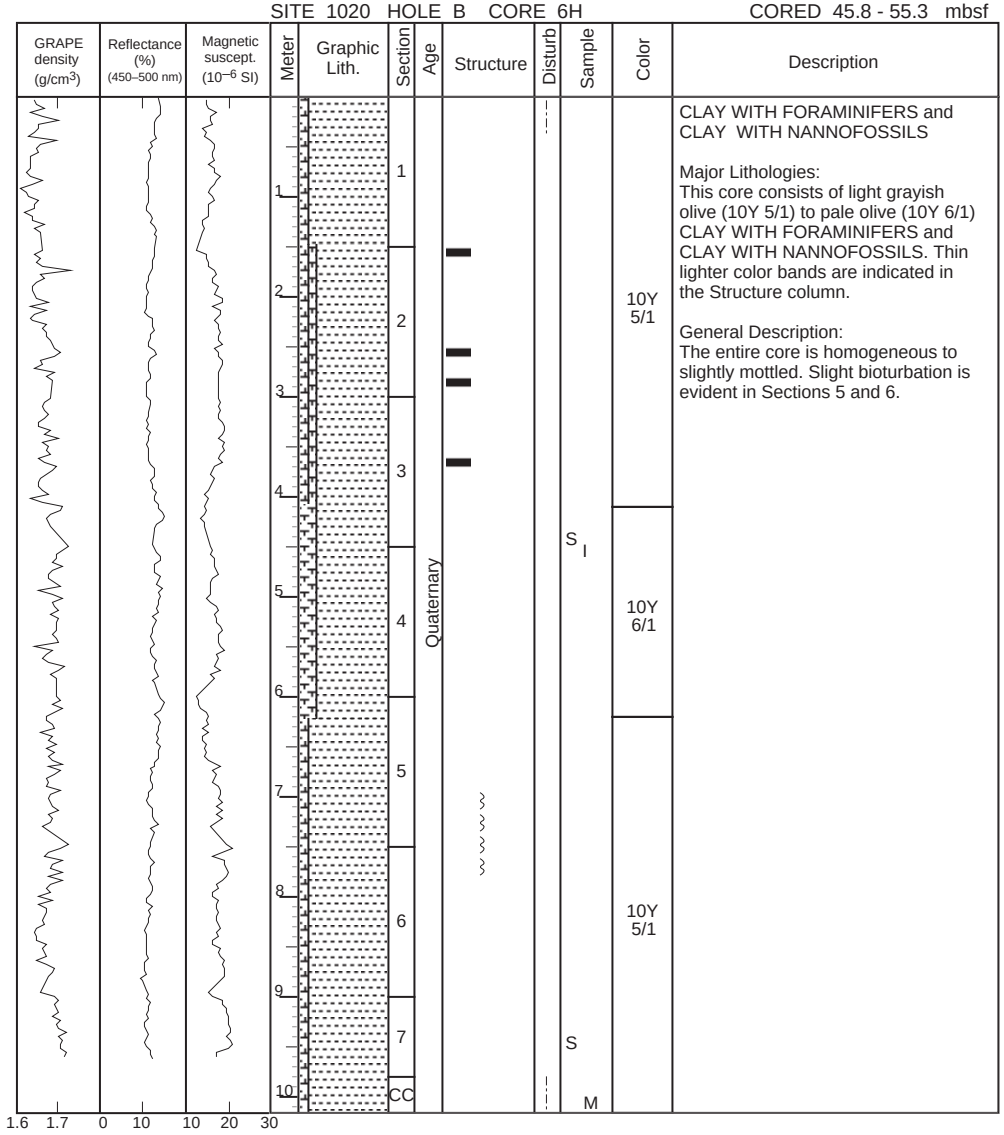
SITE 1020 HOLE B CORE 4H CORED 26.8 - 36.3 mbsf



SITE 1020 HOLE B CORE 5H CORED 36.3 - 45.8 mbsf



SITE 1020 HOLE B CORE 6H CORED 45.8 - 55.3 mbsf

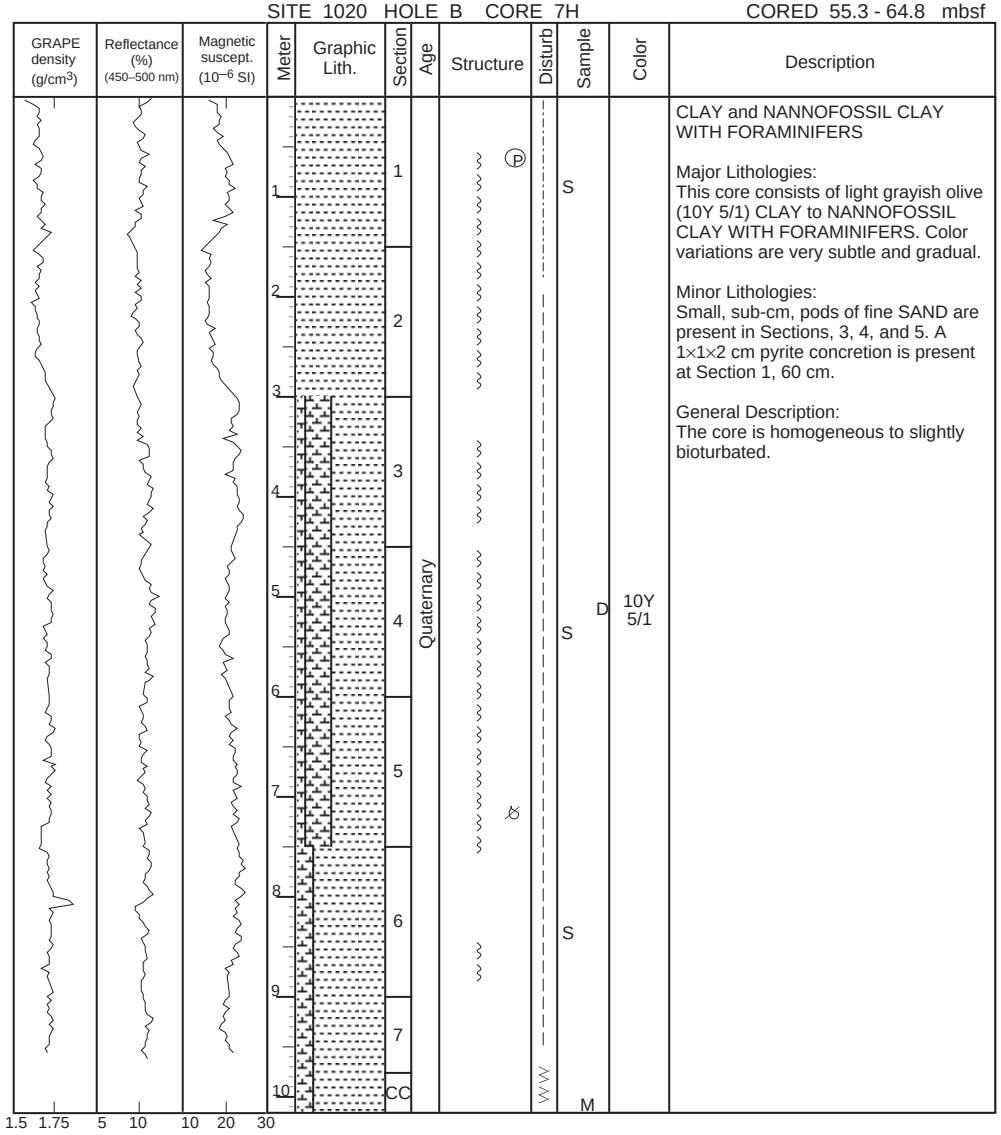


CLAY WITH FORAMINIFERS and CLAY WITH NANNOFOSSILS

Major Lithologies:
This core consists of light grayish olive (10Y 5/1) to pale olive (10Y 6/1) CLAY WITH FORAMINIFERS and CLAY WITH NANNOFOSSILS. Thin lighter color bands are indicated in the Structure column.

General Description:
The entire core is homogeneous to slightly mottled. Slight bioturbation is evident in Sections 5 and 6.

SITE 1020 HOLE B CORE 7H CORED 55.3 - 64.8 mbsf

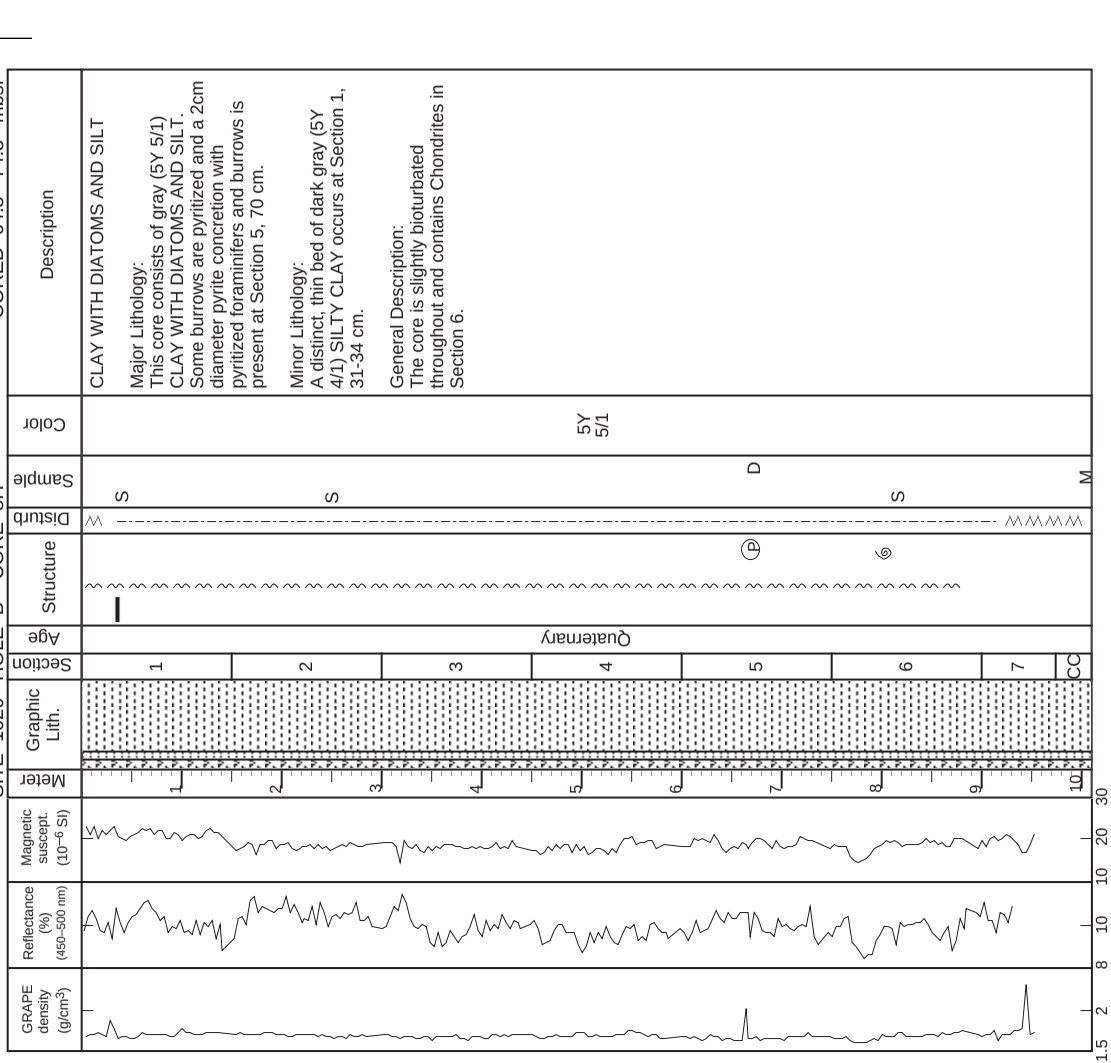


CLAY and NANNOFOSSIL CLAY WITH FORAMINIFERS

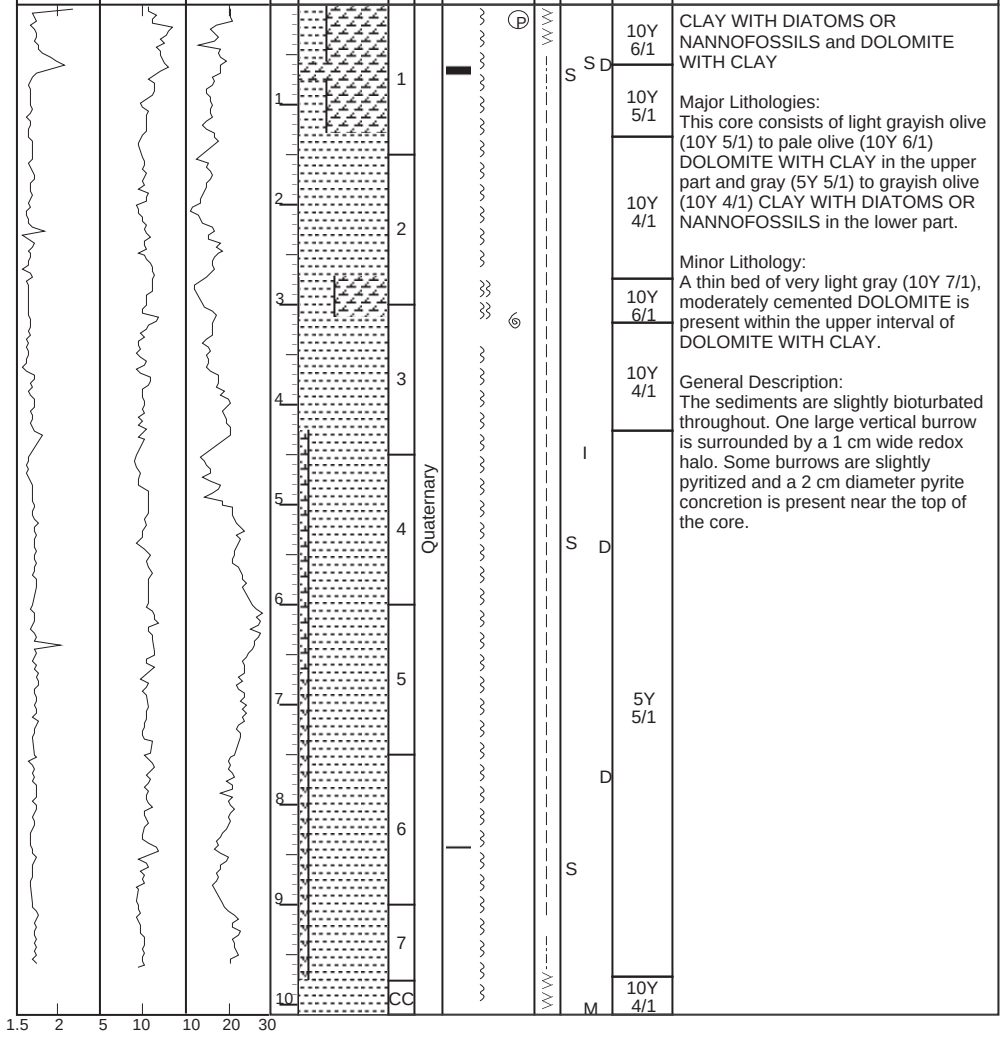
Major Lithologies:
This core consists of light grayish olive (10Y 5/1) CLAY to NANNOFOSSIL CLAY WITH FORAMINIFERS. Color variations are very subtle and gradual.

Minor Lithologies:
Small, sub-cm, pods of fine SAND are present in Sections, 3, 4, and 5. A 1×1×2 cm pyrite concretion is present at Section 1, 60 cm.

General Description:
The core is homogeneous to slightly bioturbated.


SITE 1020 HOLE B CORE 8H CORED 64.8 - 74.3 mbsf
GRAPE density (g/cm3)
Reflectance (%) (450–500 nm)
Magnetic suscept. (10−6 SI)
Meter
Graphic Lith.
Section
Age
Structure
Disturb
Sample
Color
Description
Quaternary
5Y 5/1
CLAY WITH DIATOMS AND SILT
Major Lithology:
This core consists of gray (5Y 5/1) CLAY WITH DIATOMS AND SILT. Some burrows are pyritized and a 2cm diameter pyrite concretion with pyritized foraminifers and burrows is present at Section 5, 70 cm.
Minor Lithology:
A distinct, thin bed of dark gray (5Y 4/1) SILTY CLAY occurs at Section 1, 31-34 cm.
General Description:
The core is slightly bioturbated throughout and contains Chondrites in Section 6.

SITE 1020 HOLE B CORE 9H CORED 74.3 - 83.8 mbsf



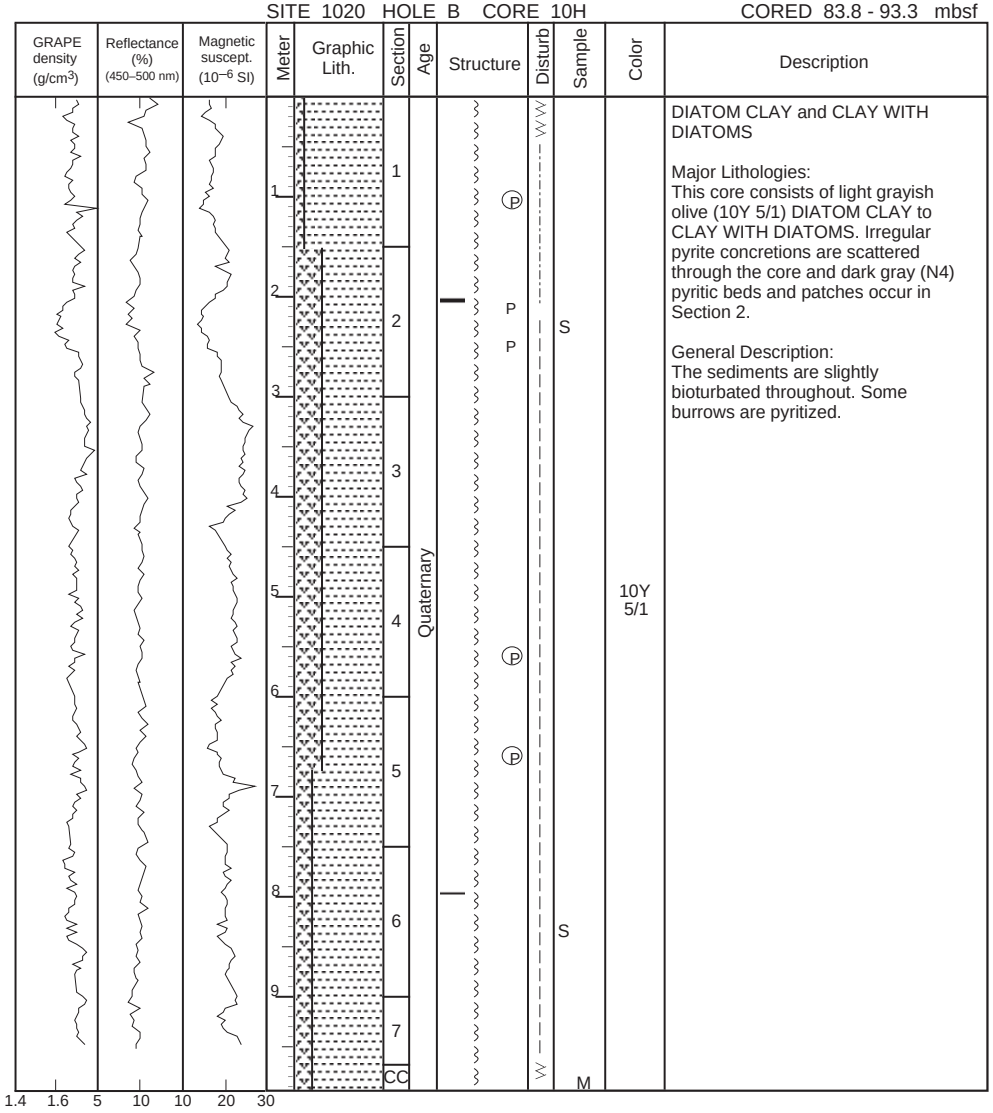
CLAY WITH DIATOMS OR NANNOFOSSILS and DOLOMITE WITH CLAY

Major Lithologies:
This core consists of light grayish olive (10Y 5/1) to pale olive (10Y 6/1) DOLOMITE WITH CLAY in the upper part and gray (5Y 5/1) to grayish olive (10Y 4/1) CLAY WITH DIATOMS OR NANNOFOSSILS in the lower part.

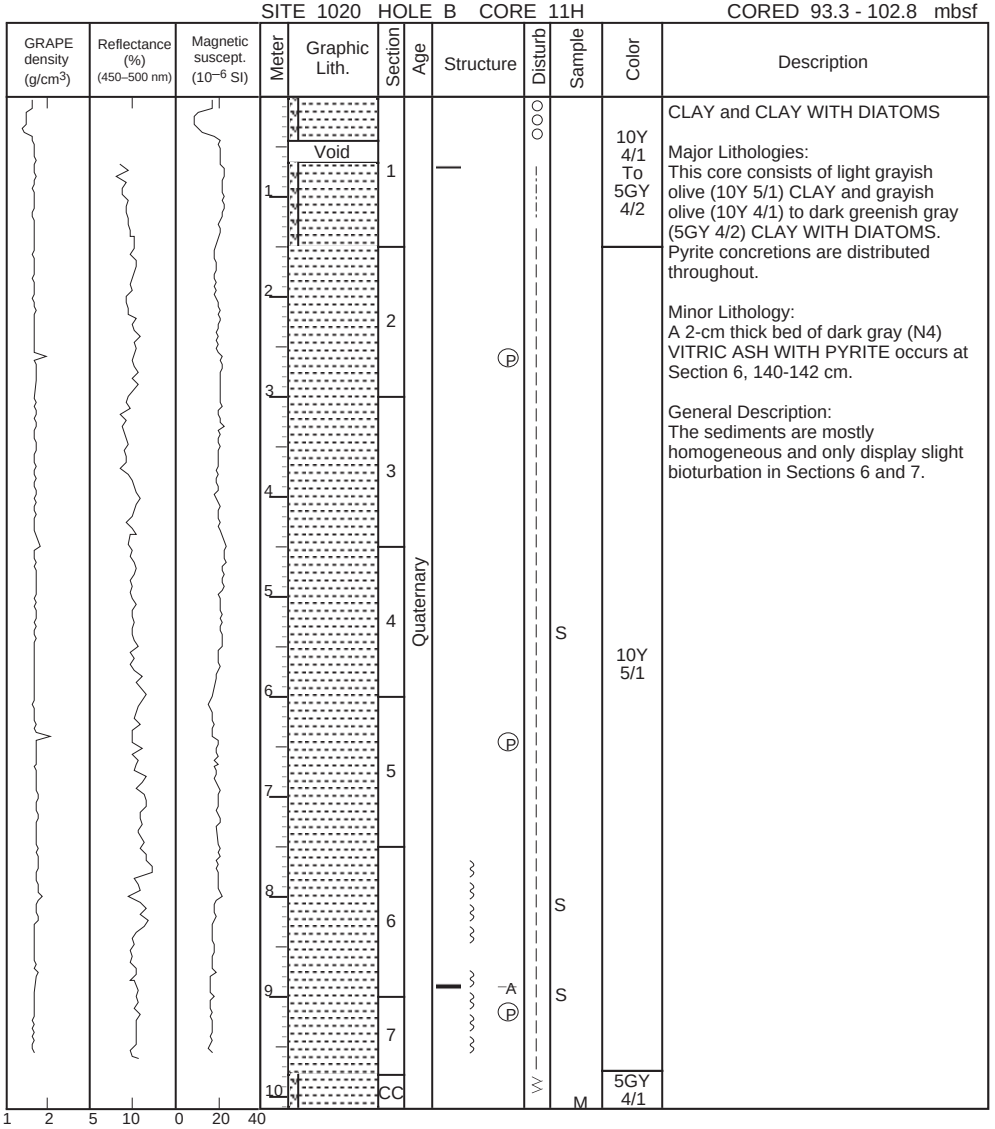
Minor Lithology:
A thin bed of very light gray (10Y 7/1), moderately cemented DOLOMITE is present within the upper interval of DOLOMITE WITH CLAY.

General Description:
The sediments are slightly bioturbated throughout. One large vertical burrow is surrounded by a 1 cm wide redox halo. Some burrows are slightly pyritized and a 2 cm diameter pyrite concretion is present near the top of the core.

SITE 1020 HOLE B CORE 10H CORED 83.8 - 93.3 mbsf



SITE 1020 HOLE B CORE 11H CORED 93.3 - 102.8 mbsf



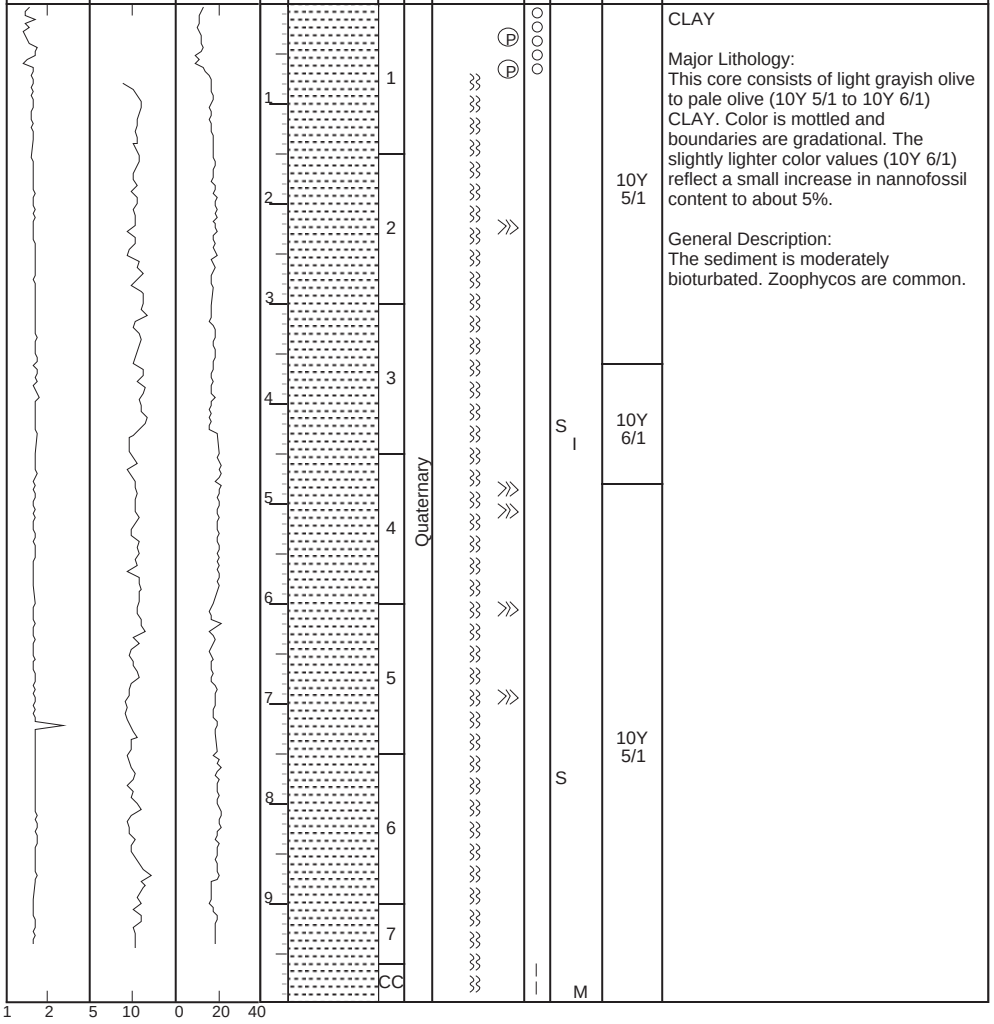
CLAY and CLAY WITH DIATOMS

Major Lithologies:
This core consists of light grayish olive (10Y 5/1) CLAY and grayish olive (10Y 4/1) to dark greenish gray (5GY 4/2) CLAY WITH DIATOMS. Pyrite concretions are distributed throughout.

Minor Lithology:
A 2-cm thick bed of dark gray (N4) VITRIC ASH WITH PYRITE occurs at Section 6, 140-142 cm.

General Description:
The sediments are mostly homogeneous and only display slight bioturbation in Sections 6 and 7.

SITE 1020 HOLE B CORE 12H CORED 102.8 - 112.3 mbsf



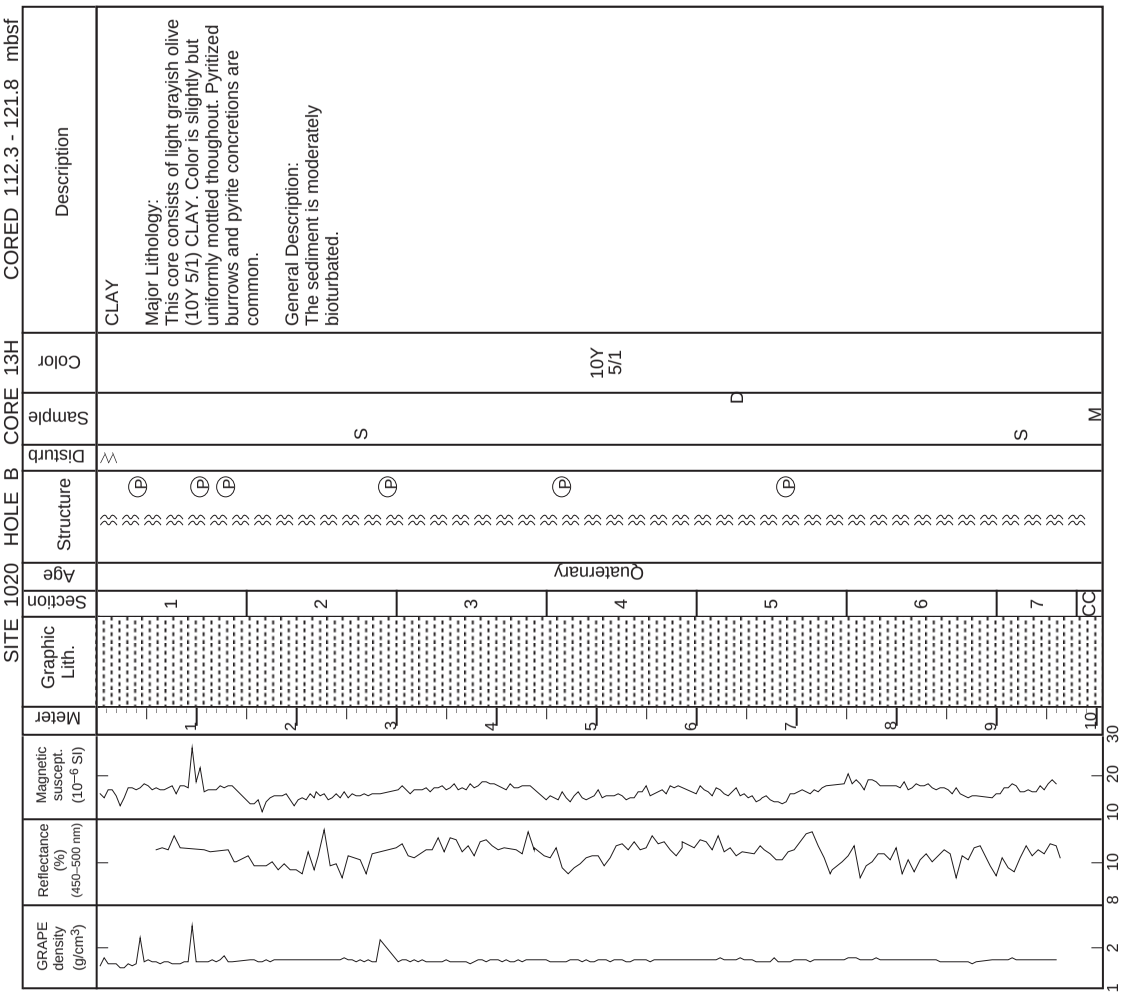
CLAY

Major Lithology:
This core consists of light grayish olive to pale olive (10Y 5/1 to 10Y 6/1) CLAY. Color is mottled and boundaries are gradational. The slightly lighter color values (10Y 6/1) reflect a small increase in nannofossil content to about 5%.

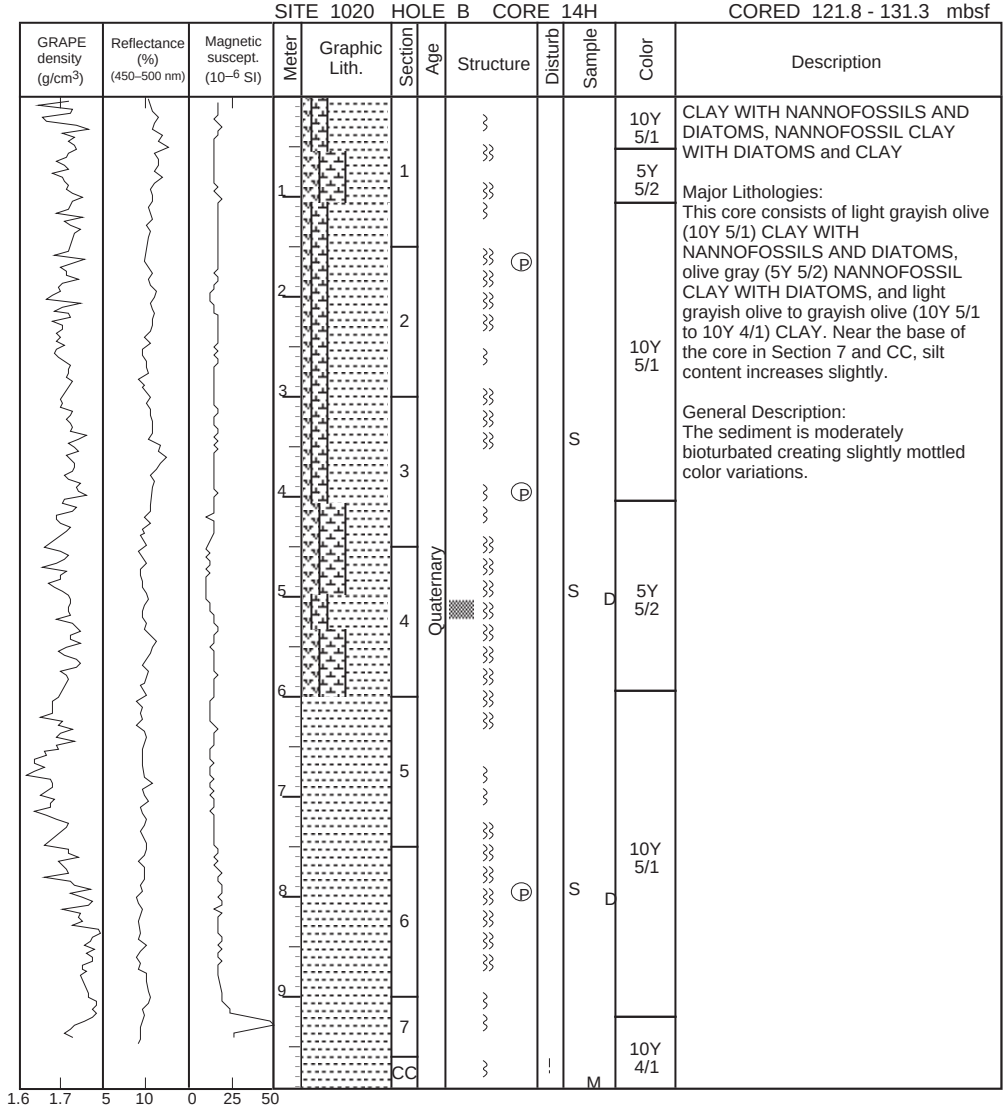
General Description:
The sediment is moderately bioturbated. Zoophycos are common.

Color: 10Y 5/1; 10Y 6/1; 10Y 5/1

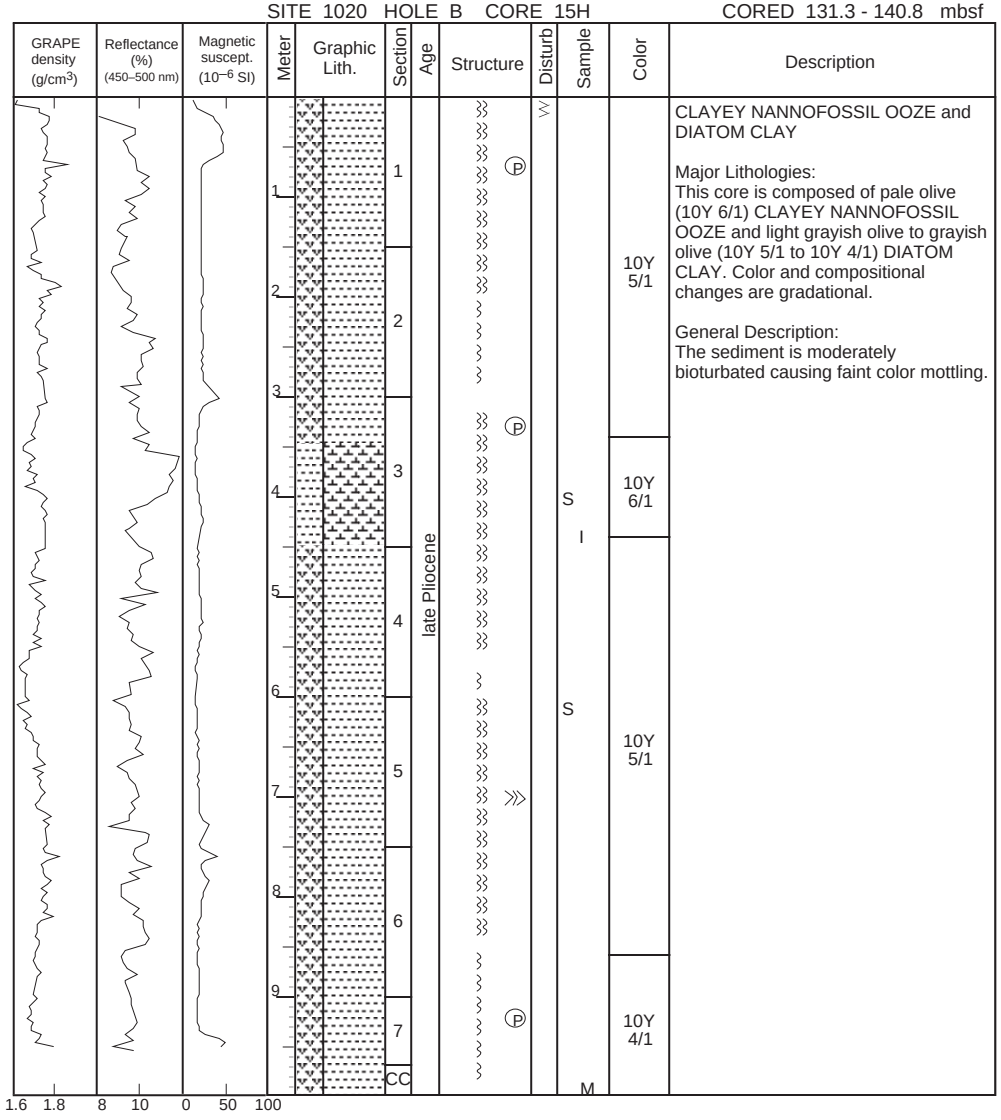
Sample: S, I, S, M


SITE 1020 HOLE B CORE 13H CORED 112.3 - 121.8 mbsf
GRAPE density (g/cm3)
Reflectance (%) (450–500 nm)
Magnetic suscept. (10–6 SI)
Meter
Graphic Lith.
Section
Age
Structure
Disturb
Sample
Color
Description
Quaternary
10Y 5/1
CLAY
Major Lithology:
This core consists of light grayish olive (10Y 5/1) CLAY. Color is slightly but uniformly mottled thoughout. Pyritized burrows and pyrite concretions are common.
General Description:
The sediment is moderately bioturbated.

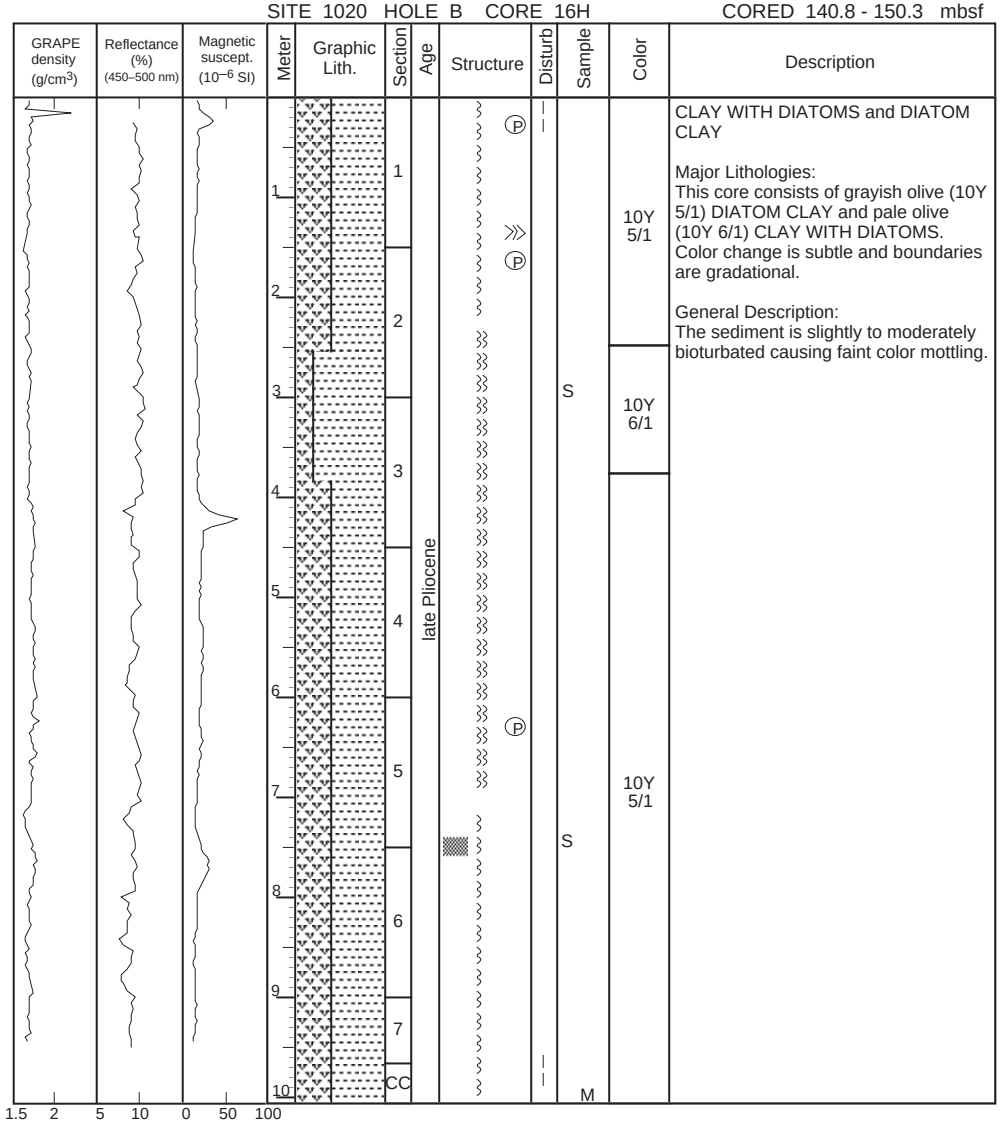
SITE 1020 HOLE B CORE 14H CORED 121.8 - 131.3 mbsf



SITE 1020 HOLE B CORE 15H CORED 131.3 - 140.8 mbsf



SITE 1020 HOLE B CORE 16H CORED 140.8 - 150.3 mbsf

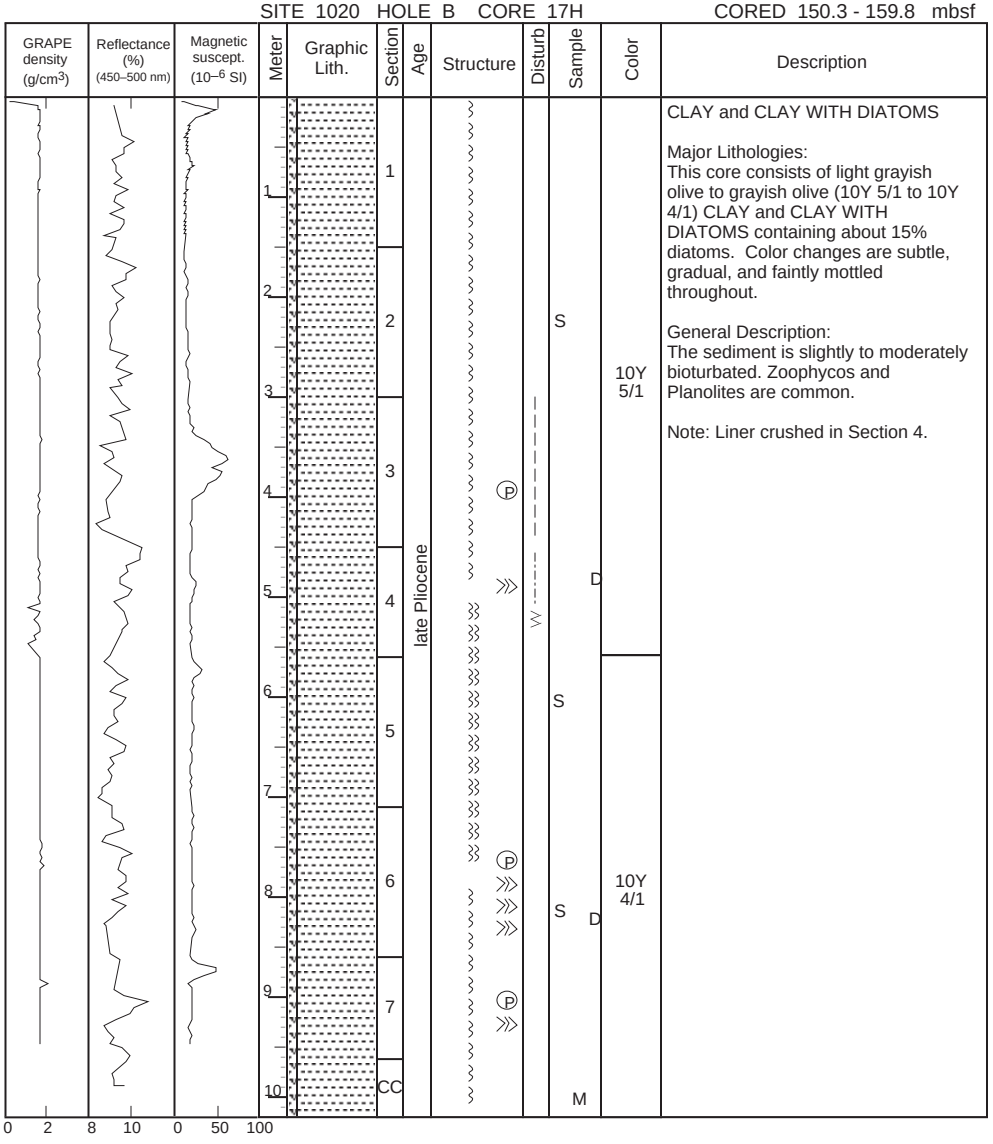


CLAY WITH DIATOMS and DIATOM CLAY

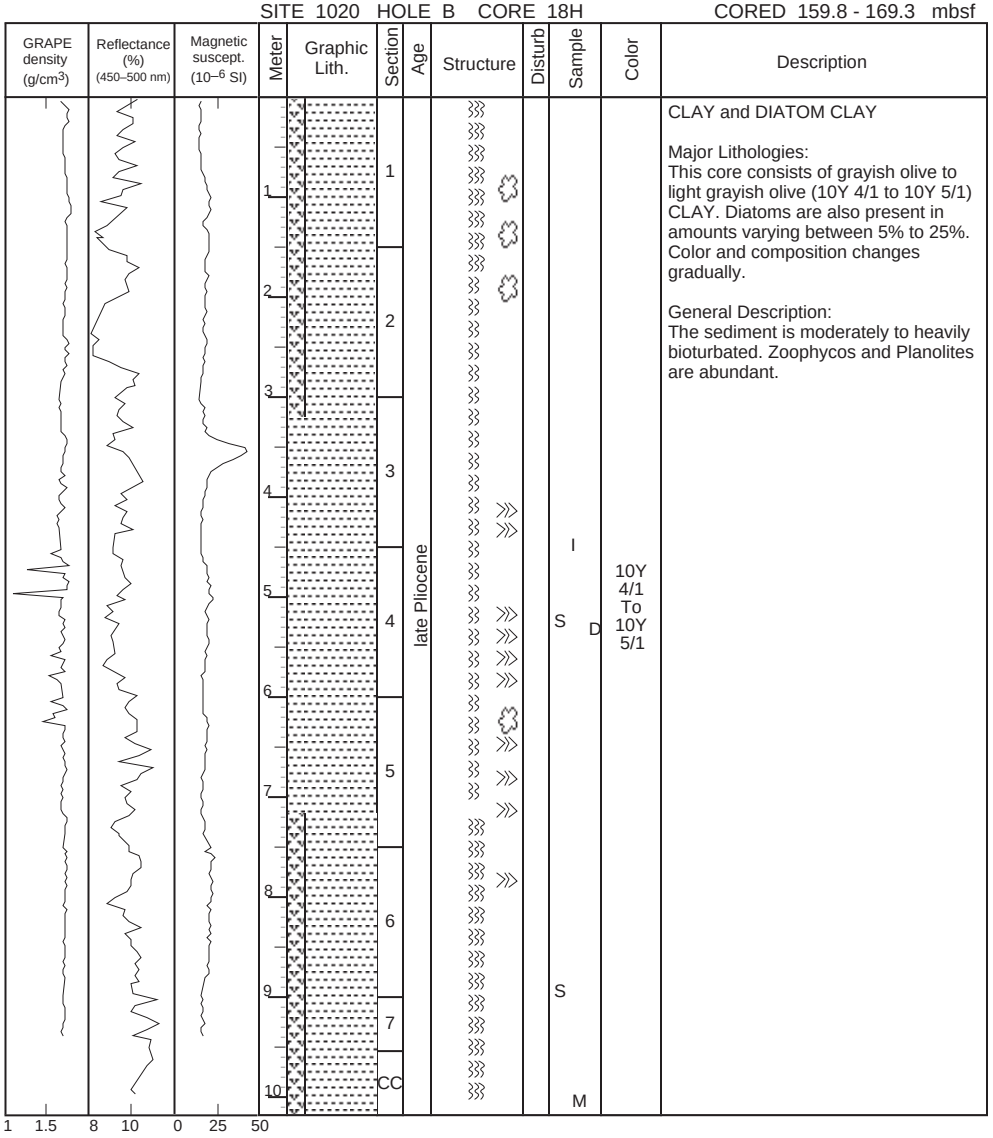
Major Lithologies:
This core consists of grayish olive (10Y 5/1) DIATOM CLAY and pale olive (10Y 6/1) CLAY WITH DIATOMS. Color change is subtle and boundaries are gradational.

General Description:
The sediment is slightly to moderately bioturbated causing faint color mottling.

SITE 1020 HOLE B CORE 17H CORED 150.3 - 159.8 mbsf



SITE 1020 HOLE B CORE 18H CORED 159.8 - 169.3 mbsf

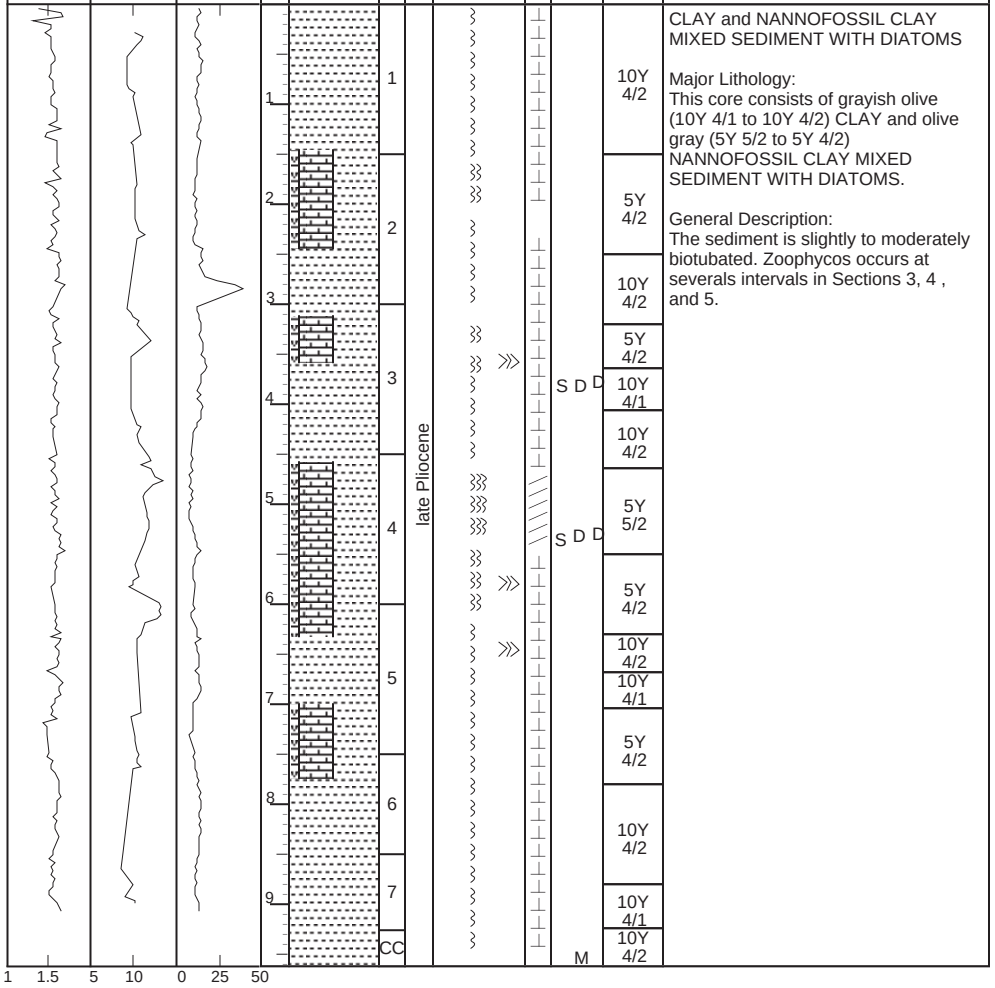


CLAY and DIATOM CLAY

Major Lithologies:
This core consists of grayish olive to light grayish olive (10Y 4/1 to 10Y 5/1) CLAY. Diatoms are also present in amounts varying between 5% to 25%. Color and composition changes gradually.

General Description:
The sediment is moderately to heavily bioturbated. Zoophycos and Planolites are abundant.

SITE 1020 HOLE B CORE 19X CORED 169.3 - 178.9 mbsf

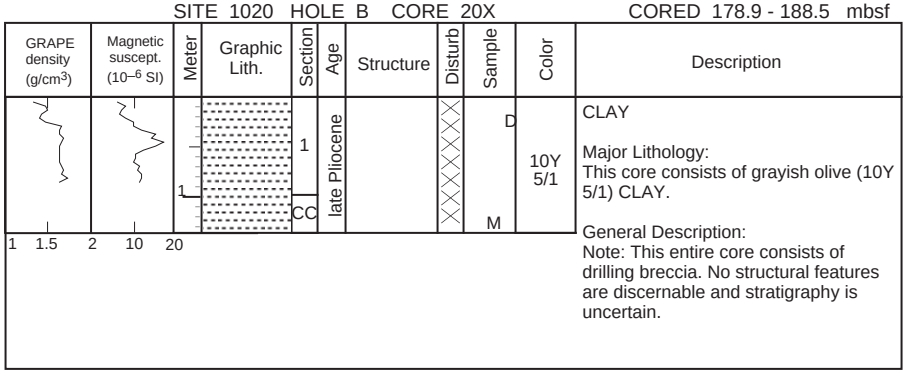


CLAY and NANNOFOSSIL CLAY MIXED SEDIMENT WITH DIATOMS

Major Lithology:
This core consists of grayish olive (10Y 4/1 to 10Y 4/2) CLAY and olive gray (5Y 5/2 to 5Y 4/2) NANNOFOSSIL CLAY MIXED SEDIMENT WITH DIATOMS.

General Description:
The sediment is slightly to moderately biotubated. Zoophycos occurs at severals intervals in Sections 3, 4 , and 5.

SITE 1020 HOLE B CORE 20X CORED 178.9 - 188.5 mbsf

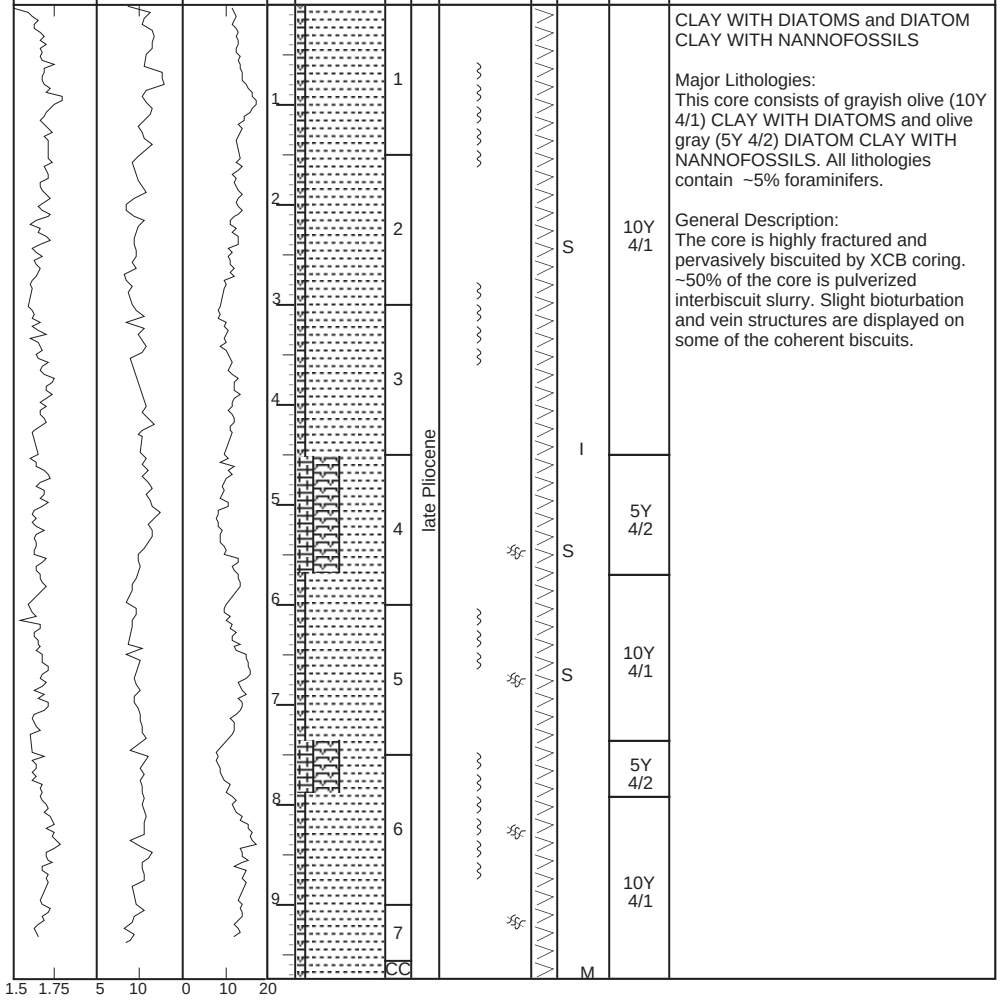


CLAY

Major Lithology:
This core consists of grayish olive (10Y 5/1) CLAY.

General Description:
Note: This entire core consists of drilling breccia. No structural features are discernable and stratigraphy is uncertain.

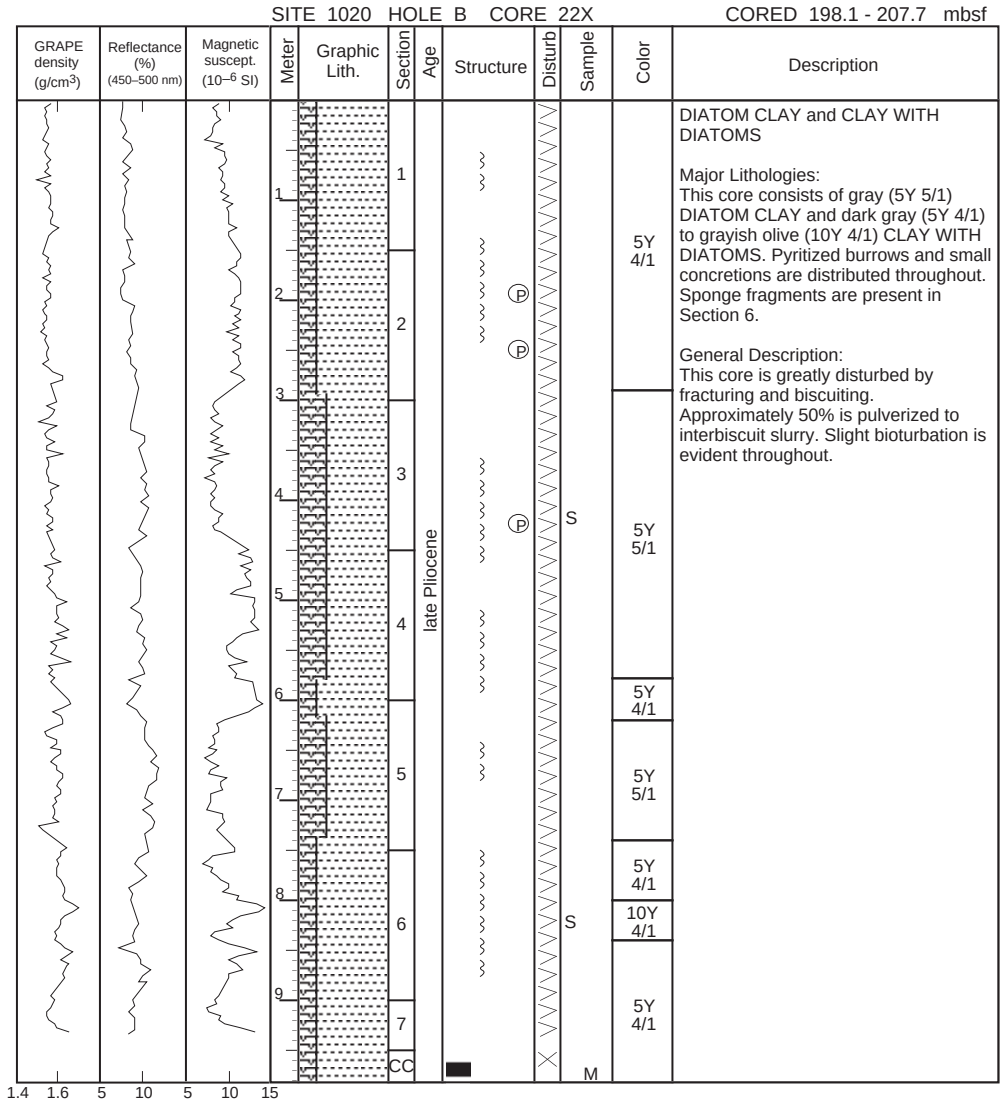
SITE 1020 HOLE B CORE 21X CORED 188.5 - 198.1 mbsf



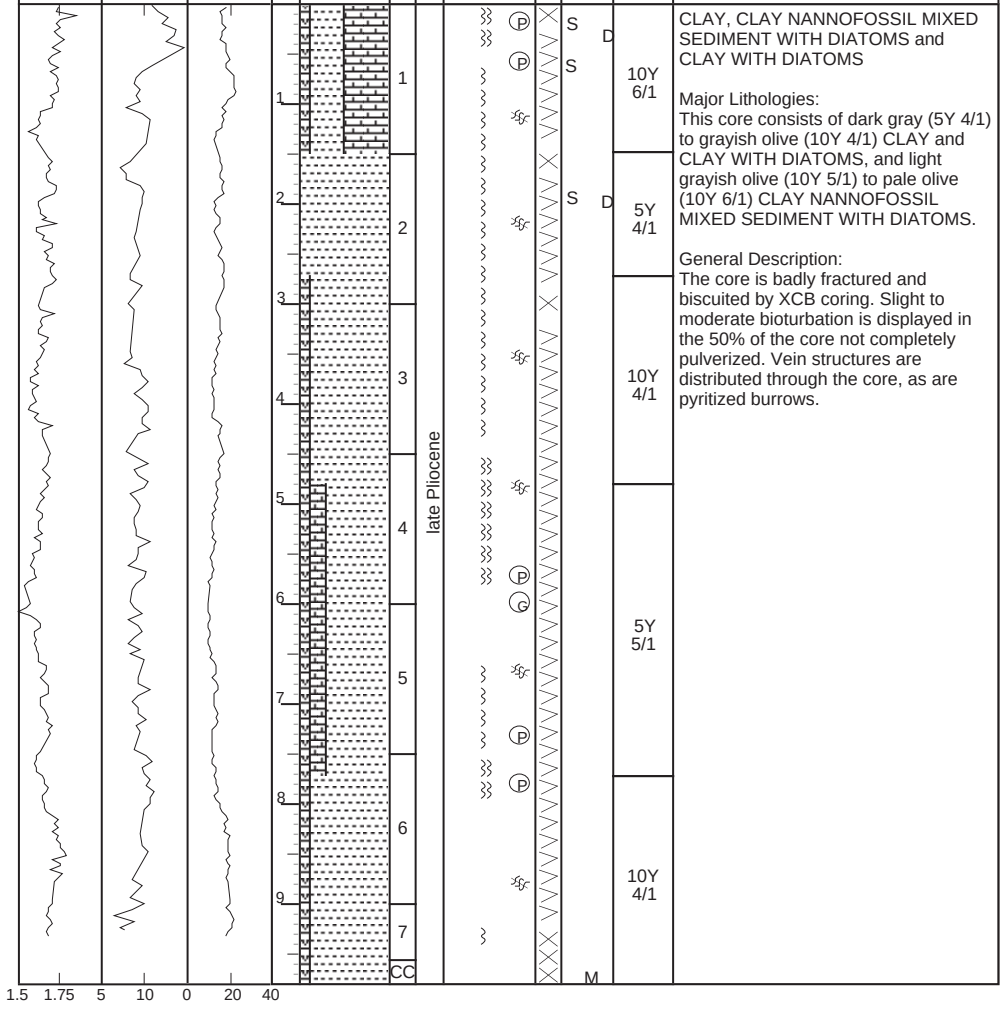
CLAY WITH DIATOMS and DIATOM CLAY WITH NANNOFOSSILS

Major Lithologies:
This core consists of grayish olive (10Y 4/1) CLAY WITH DIATOMS and olive gray (5Y 4/2) DIATOM CLAY WITH NANNOFOSSILS. All lithologies contain ~5% foraminifers.

General Description:
The core is highly fractured and pervasively biscuited by XCB coring. ~50% of the core is pulverized interbiscuit slurry. Slight bioturbation and vein structures are displayed on some of the coherent biscuits.


SITE 1020 HOLE B CORE 22X
CORED 198.1 - 207.7 mbsf
GRAPE density (g/cm3)
Reflectance (%) (450–500 nm)
Magnetic suscept. (10–6 SI)
Meter
Graphic Lith.
Section
Age
Structure
Disturb
Sample
Color
Description
late Pliocene
5Y 4/1
5Y 5/1
10Y 4/1
DIATOM CLAY and CLAY WITH DIATOMS
Major Lithologies:
This core consists of gray (5Y 5/1) DIATOM CLAY and dark gray (5Y 4/1) to grayish olive (10Y 4/1) CLAY WITH DIATOMS. Pyritized burrows and small concretions are distributed throughout. Sponge fragments are present in Section 6.
General Description:
This core is greatly disturbed by fracturing and biscuiting. Approximately 50% is pulverized to interbiscuit slurry. Slight bioturbation is evident throughout.

SITE 1020 HOLE B CORE 23X CORED 207.7 - 217.3 mbsf

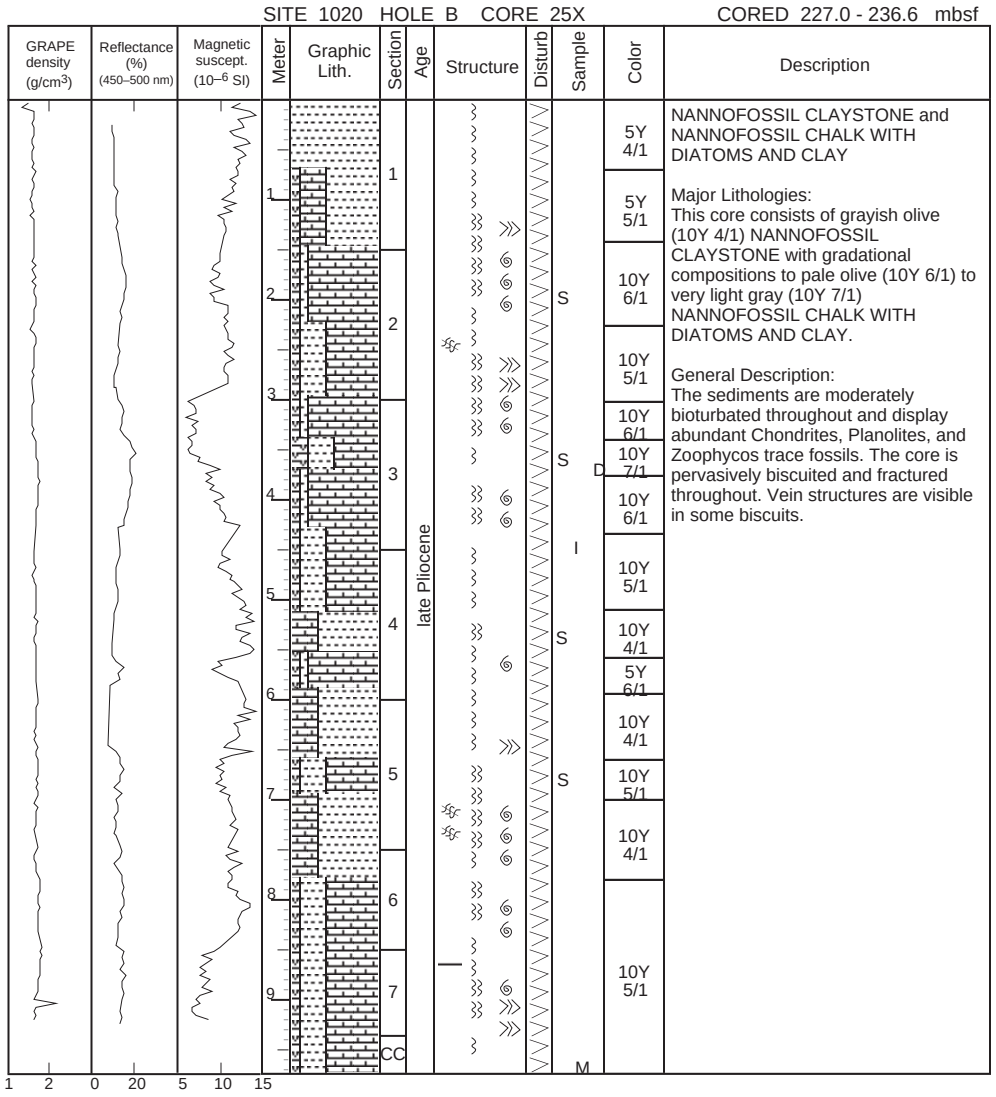


CLAY, CLAY NANNOFOSSIL MIXED SEDIMENT WITH DIATOMS and CLAY WITH DIATOMS

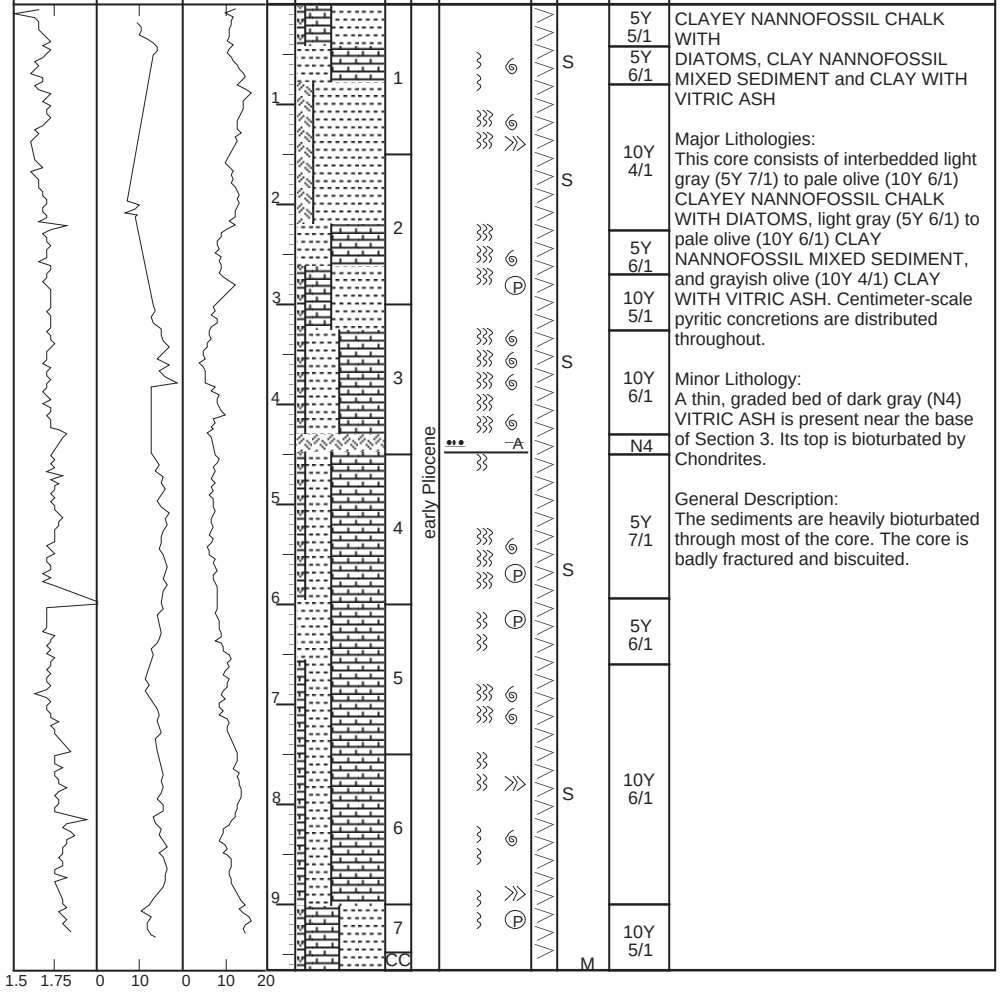
Major Lithologies:
This core consists of dark gray (5Y 4/1) to grayish olive (10Y 4/1) CLAY and CLAY WITH DIATOMS, and light grayish olive (10Y 5/1) to pale olive (10Y 6/1) CLAY NANNOFOSSIL MIXED SEDIMENT WITH DIATOMS.

General Description:
The core is badly fractured and biscuited by XCB coring. Slight to moderate bioturbation is displayed in the 50% of the core not completely pulverized. Vein structures are distributed through the core, as are pyritized burrows.

1020B-24X NO RECOVERY


SITE 1020 HOLE B CORE 25X CORED 227.0 - 236.6 mbsf
GRAPE density (g/cm3)
Reflectance (%) (450–500 nm)
Magnetic suscept. (10–6 SI)
Meter
Graphic Lith.
Section
Age
Structure
Disturb
Sample
Color
Description
late Pliocene
CC
1 2
0 20
5 10 15
5Y 4/1
5Y 5/1
10Y 6/1
10Y 5/1
10Y 6/1
10Y 7/1
10Y 6/1
10Y 5/1
10Y 4/1
5Y 6/1
10Y 4/1
10Y 5/1
10Y 4/1
10Y 5/1
NANNOFOSSIL CLAYSTONE and NANNOFOSSIL CHALK WITH DIATOMS AND CLAY
Major Lithologies:
This core consists of grayish olive (10Y 4/1) NANNOFOSSIL CLAYSTONE with gradational compositions to pale olive (10Y 6/1) to very light gray (10Y 7/1) NANNOFOSSIL CHALK WITH DIATOMS AND CLAY.
General Description:
The sediments are moderately bioturbated throughout and display abundant Chondrites, Planolites, and Zoophycos trace fossils. The core is pervasively biscuited and fractured throughout. Vein structures are visible in some biscuits.

SITE 1020 HOLE B CORE 26X CORED 236.6 - 246.3 mbsf



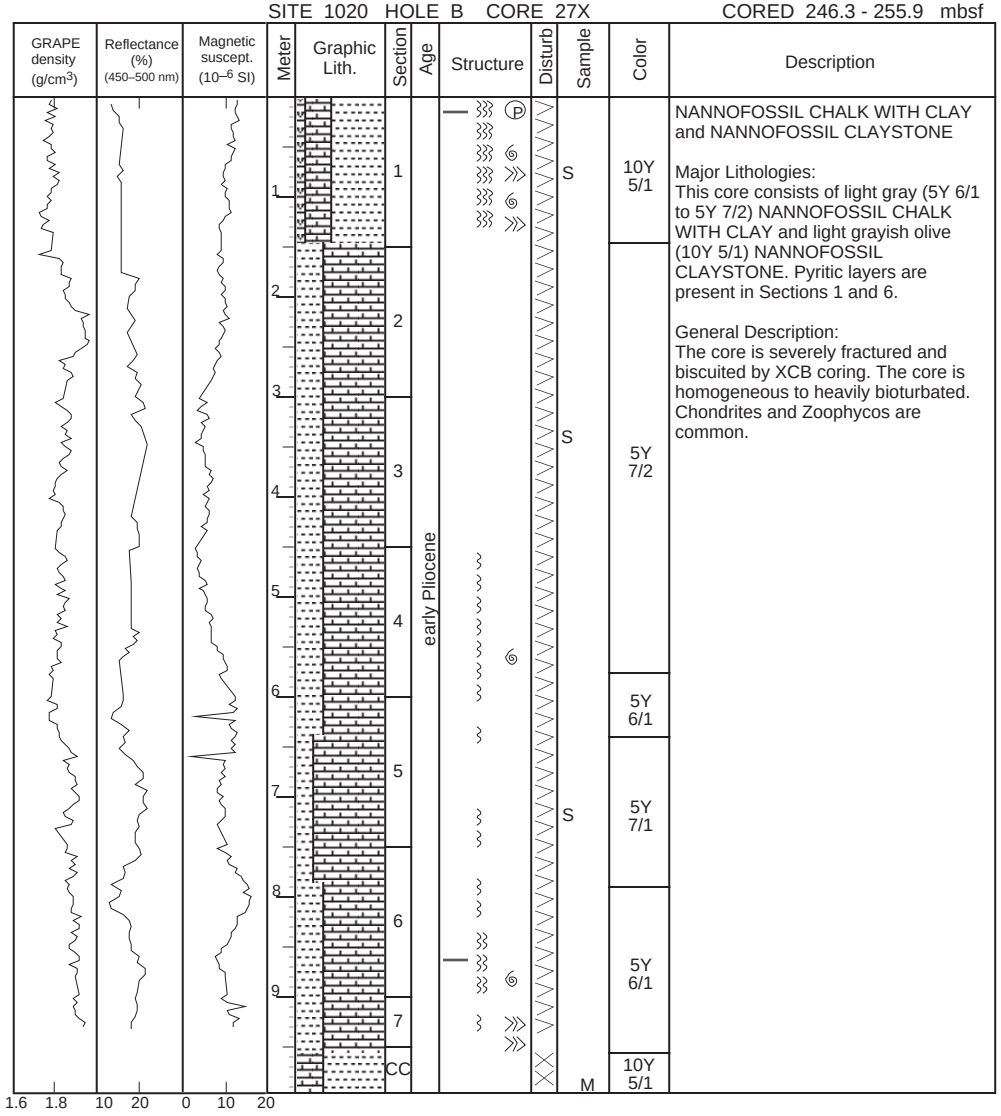
CLAYEY NANNOFOSSIL CHALK WITH DIATOMS, CLAY NANNOFOSSIL MIXED SEDIMENT and CLAY WITH VITRIC ASH

Major Lithologies:
This core consists of interbedded light gray (5Y 7/1) to pale olive (10Y 6/1) CLAYEY NANNOFOSSIL CHALK WITH DIATOMS, light gray (5Y 6/1) to pale olive (10Y 6/1) CLAY NANNOFOSSIL MIXED SEDIMENT, and grayish olive (10Y 4/1) CLAY WITH VITRIC ASH. Centimeter-scale pyritic concretions are distributed throughout.

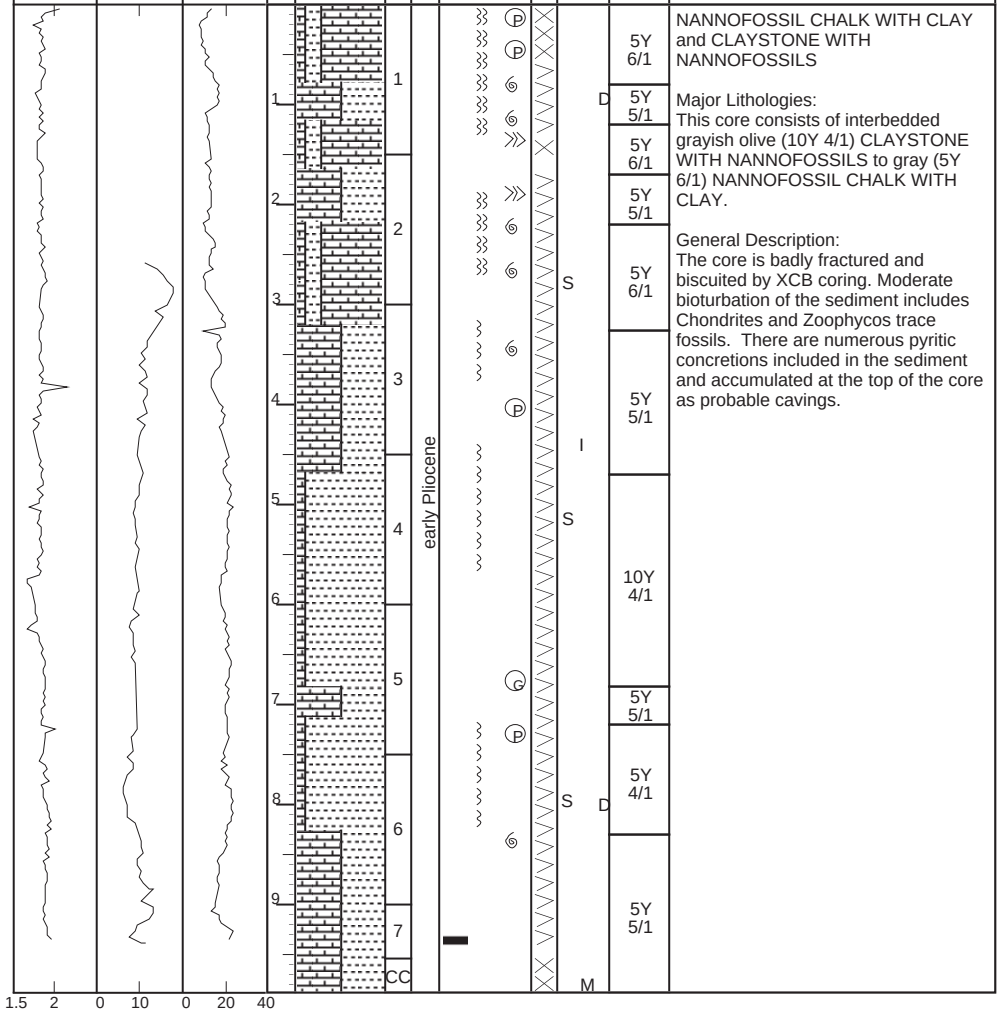
Minor Lithology:
A thin, graded bed of dark gray (N4) VITRIC ASH is present near the base of Section 3. Its top is bioturbated by Chondrites.

General Description:
The sediments are heavily bioturbated through most of the core. The core is badly fractured and biscuited.

SITE 1020 HOLE B CORE 27X CORED 246.3 - 255.9 mbsf



SITE 1020 HOLE B CORE 28X CORED 255.9 - 265.3 mbsf

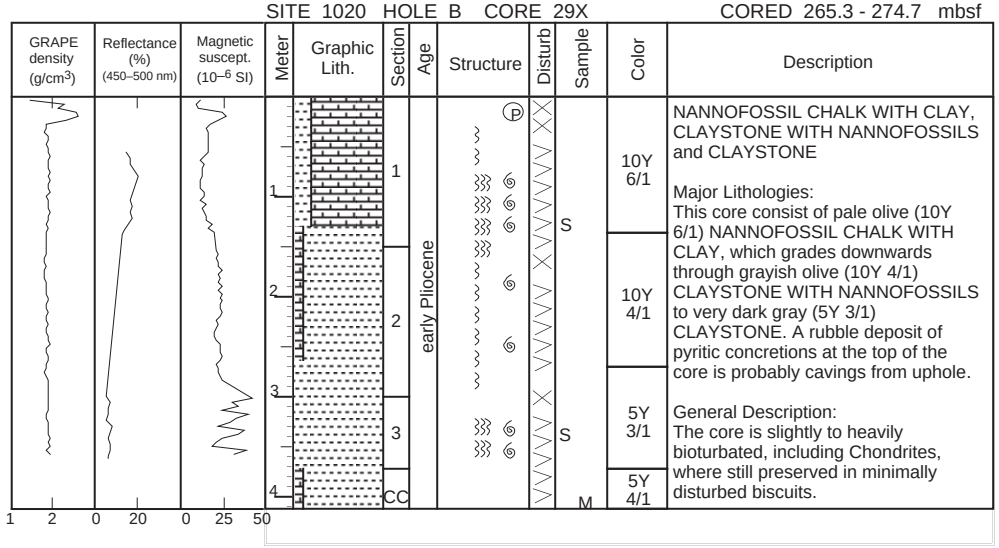


NANNOFOSSIL CHALK WITH CLAY and CLAYSTONE WITH NANNOFOSSILS

Major Lithologies:
This core consists of interbedded grayish olive (10Y 4/1) CLAYSTONE WITH NANNOFOSSILS to gray (5Y 6/1) NANNOFOSSIL CHALK WITH CLAY.

General Description:
The core is badly fractured and biscuited by XCB coring. Moderate bioturbation of the sediment includes Chondrites and Zoophycos trace fossils. There are numerous pyritic concretions included in the sediment and accumulated at the top of the core as probable cavings.

SITE 1020 HOLE B CORE 29X CORED 265.3 - 274.7 mbsf

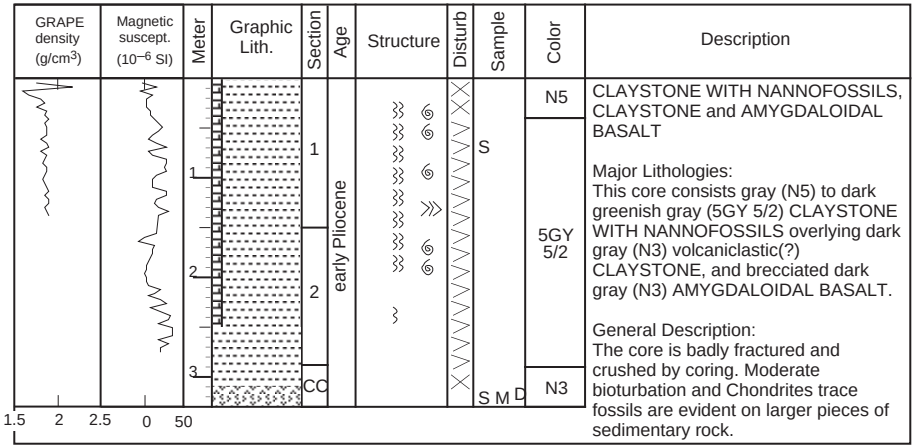


NANNOFOSSIL CHALK WITH CLAY, CLAYSTONE WITH NANNOFOSSILS and CLAYSTONE

Major Lithologies:
This core consist of pale olive (10Y 6/1) NANNOFOSSIL CHALK WITH CLAY, which grades downwards through grayish olive (10Y 4/1) CLAYSTONE WITH NANNOFOSSILS to very dark gray (5Y 3/1) CLAYSTONE. A rubble deposit of pyritic concretions at the top of the core is probably cavings from uphole.

General Description:
The core is slightly to heavily bioturbated, including Chondrites, where still preserved in minimally disturbed biscuits.

SITE 1020 HOLE B CORE 30X CORED 274.7 - 278.8 mbsf

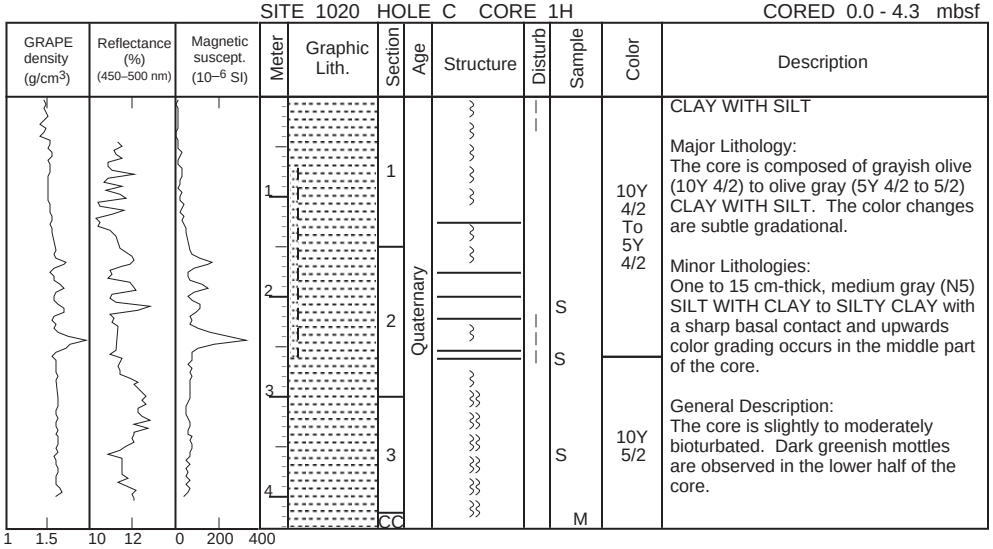


CLAYSTONE WITH NANNOFOSSILS, CLAYSTONE and AMYGDALOIDAL BASALT

Major Lithologies:
This core consists gray (N5) to dark greenish gray (5GY 5/2) CLAYSTONE WITH NANNOFOSSILS overlying dark gray (N3) volcaniclastic(?) CLAYSTONE, and brecciated dark gray (N3) AMYGDALOIDAL BASALT.

General Description:
The core is badly fractured and crushed by coring. Moderate bioturbation and Chondrites trace fossils are evident on larger pieces of sedimentary rock.

SITE 1020 HOLE C CORE 1H CORED 0.0 - 4.3 mbsf



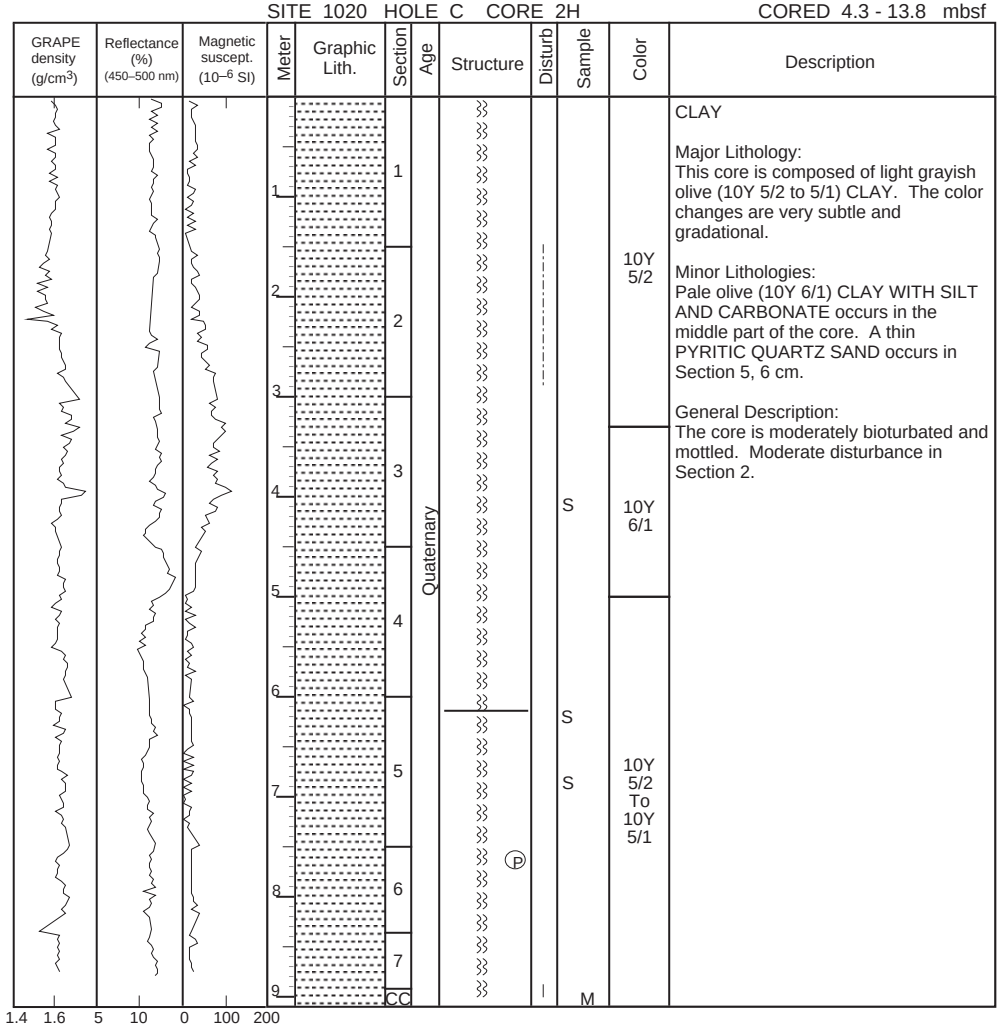
CLAY WITH SILT

Major Lithology:
The core is composed of grayish olive (10Y 4/2) to olive gray (5Y 4/2 to 5/2) CLAY WITH SILT. The color changes are subtle gradational.

Minor Lithologies:
One to 15 cm-thick, medium gray (N5) SILT WITH CLAY to SILTY CLAY with a sharp basal contact and upwards color grading occurs in the middle part of the core.

General Description:
The core is slightly to moderately bioturbated. Dark greenish mottles are observed in the lower half of the core.

SITE 1020 HOLE C CORE 2H CORED 4.3 - 13.8 mbsf

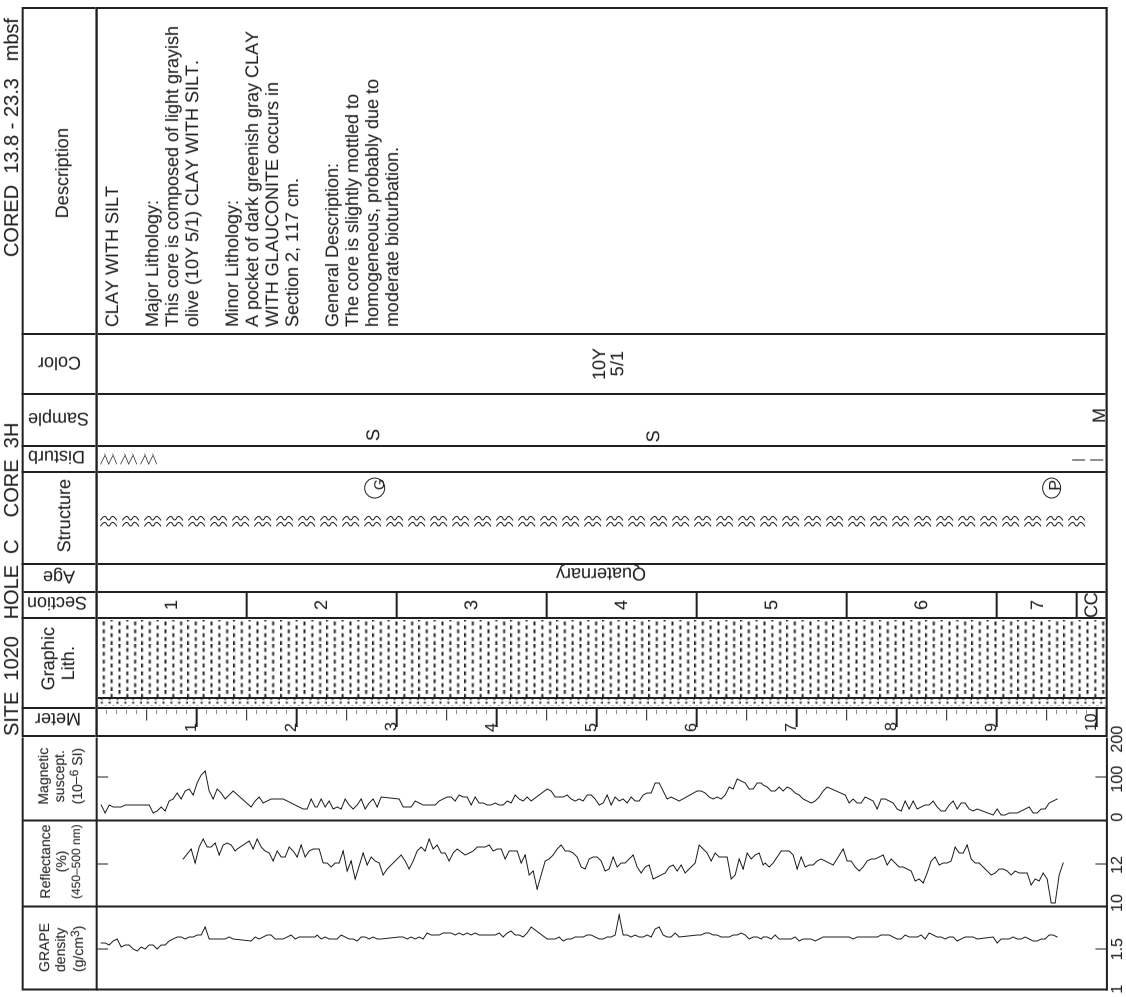


CLAY

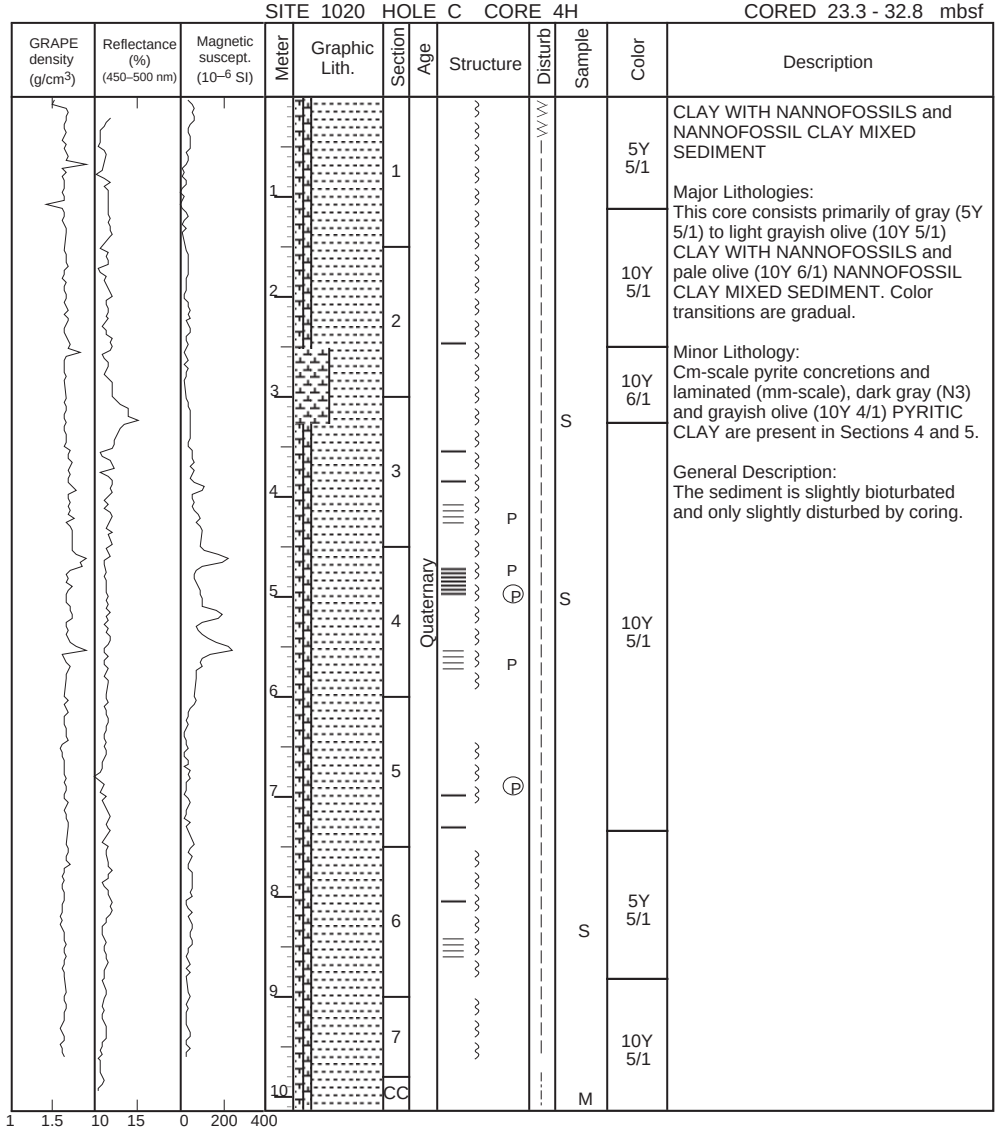
Major Lithology:
This core is composed of light grayish olive (10Y 5/2 to 5/1) CLAY. The color changes are very subtle and gradational.

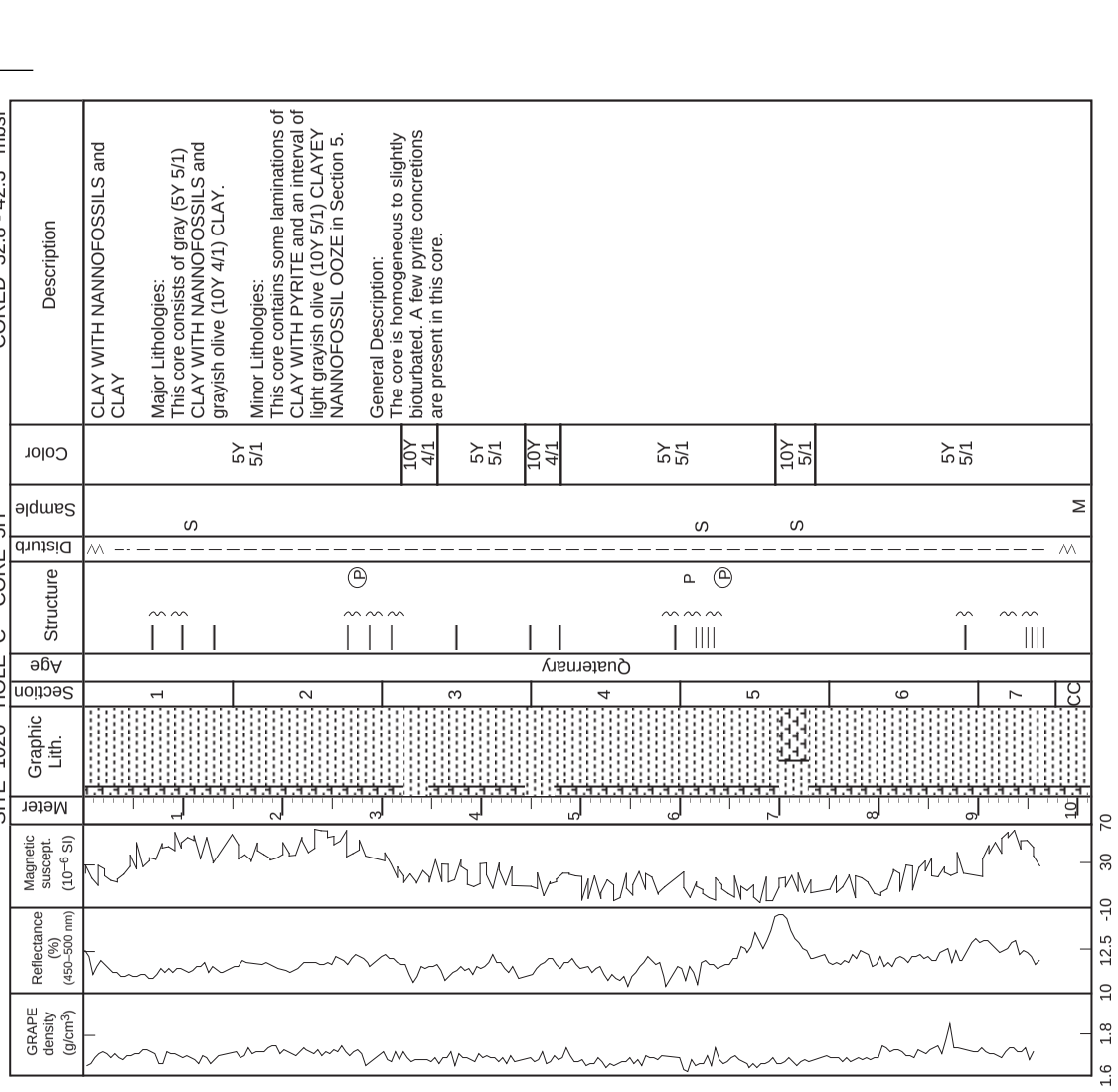
Minor Lithologies:
Pale olive (10Y 6/1) CLAY WITH SILT AND CARBONATE occurs in the middle part of the core. A thin PYRITIC QUARTZ SAND occurs in Section 5, 6 cm.

General Description:
The core is moderately bioturbated and mottled. Moderate disturbance in Section 2.

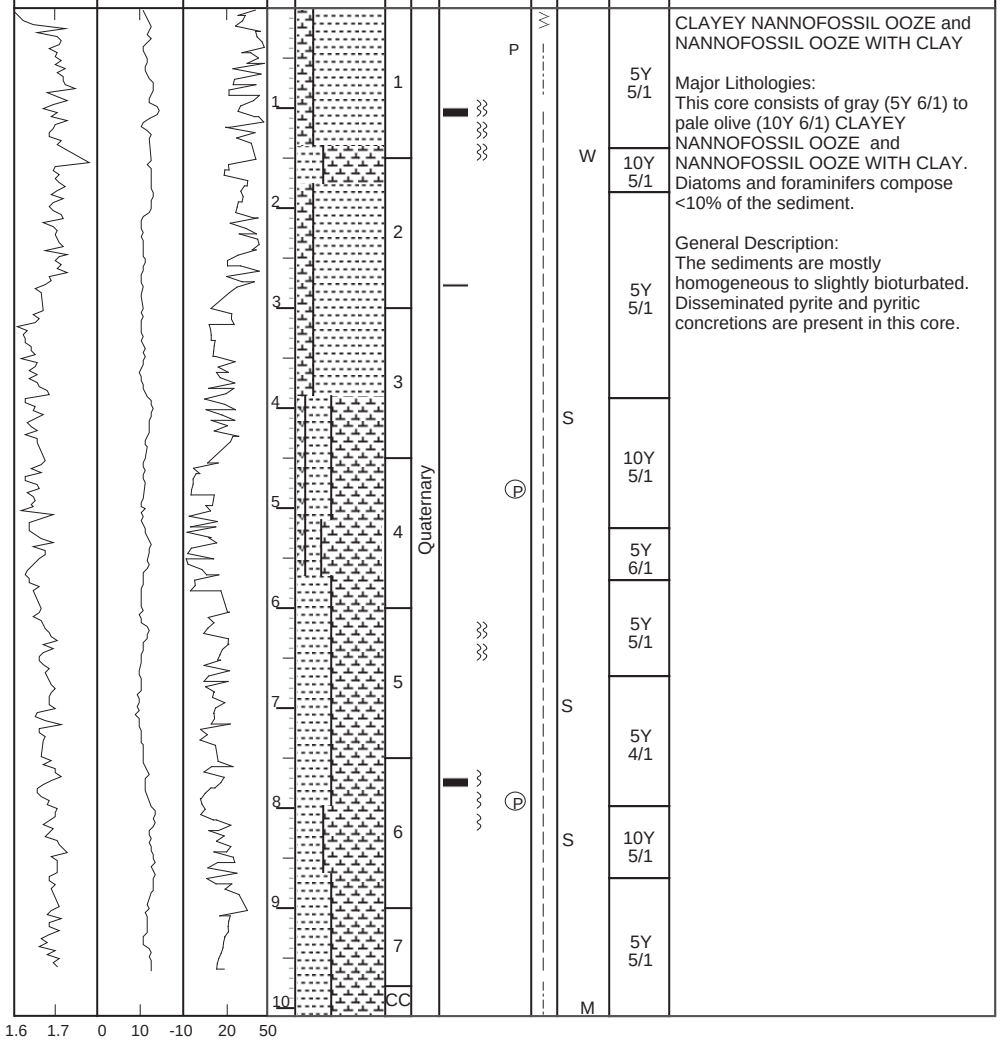

SITE 1020 HOLE C CORE 3H CORED 13.8 - 23.3 mbsf
GRAPE density (g/cm3)
Reflectance (%) (450–500 nm)
Magnetic suscept. (10–6 SI)
Meter
Graphic Lith.
Section
Age
Structure
Disturb
Sample
Color
Description
Quaternary
10Y 5/1
CLAY WITH SILT
Major Lithology:
This core is composed of light grayish olive (10Y 5/1) CLAY WITH SILT.
Minor Lithology:
A pocket of dark greenish gray CLAY WITH GLAUCONITE occurs in Section 2, 117 cm.
General Description:
The core is slightly mottled to homogeneous, probably due to moderate bioturbation.

SITE 1020 HOLE C CORE 4H CORED 23.3 - 32.8 mbsf




SITE 1020 HOLE C CORE 5H CORED 32.8 - 42.3 mbsf
GRAPE density (g/cm³)
Reflectance (%) (450–500 nm)
Magnetic suscept. (10⁻⁶ SI)
Meter
Graphic Lith.
Section
Age
Structure
Disturb
Sample
Color
Description
Quaternary
CLAY WITH NANNOFOSSILS and CLAY
Major Lithologies:
This core consists of gray (5Y 5/1) CLAY WITH NANNOFOSSILS and grayish olive (10Y 4/1) CLAY.
Minor Lithologies:
This core contains some laminations of CLAY WITH PYRITE and an interval of light grayish olive (10Y 5/1) CLAYEY NANNOFOSSIL OOZE in Section 5.
General Description:
The core is homogeneous to slightly bioturbated. A few pyrite concretions are present in this core.
5Y 5/1
10Y 4/1
10Y 5/1
1.6 1.8 10 12.5 -10 30 70

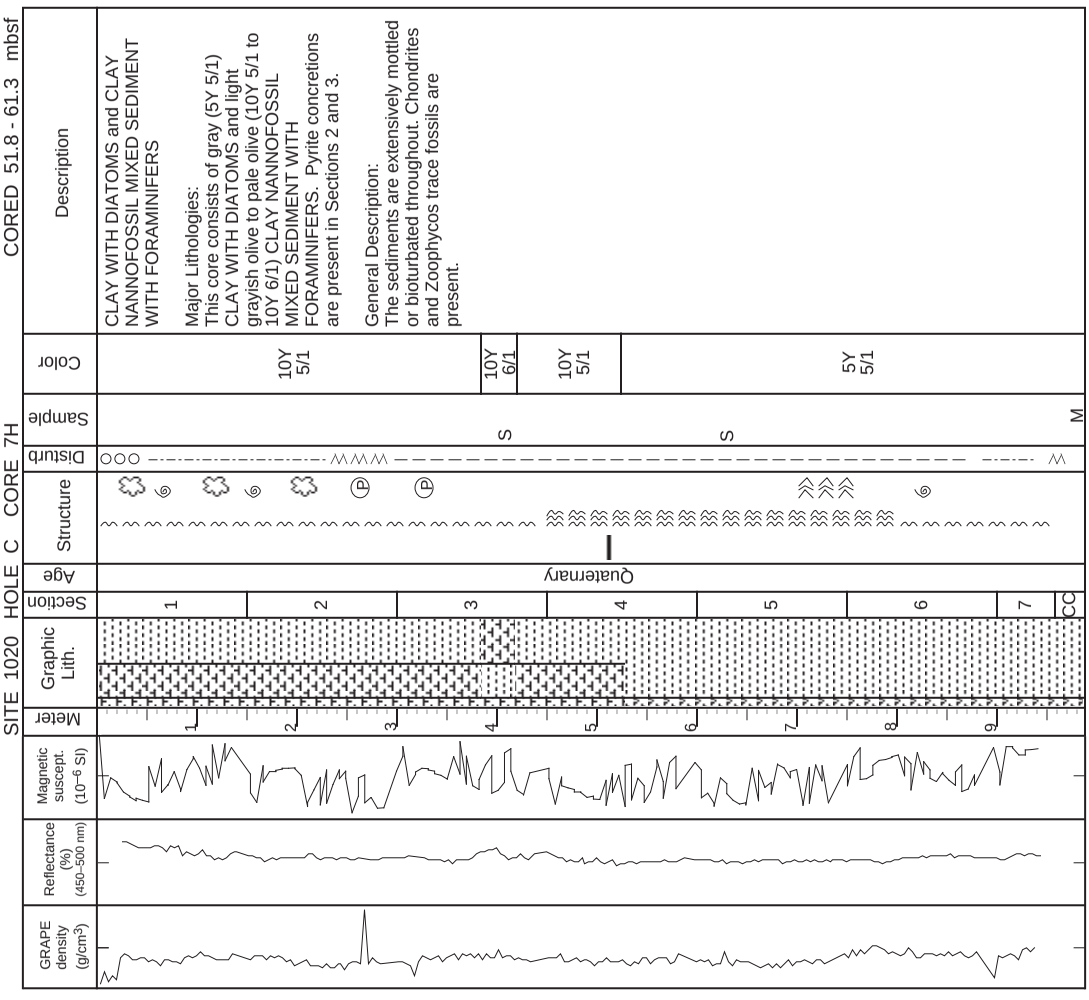
SITE 1020 HOLE C CORE 6H CORED 42.3 - 51.8 mbsf



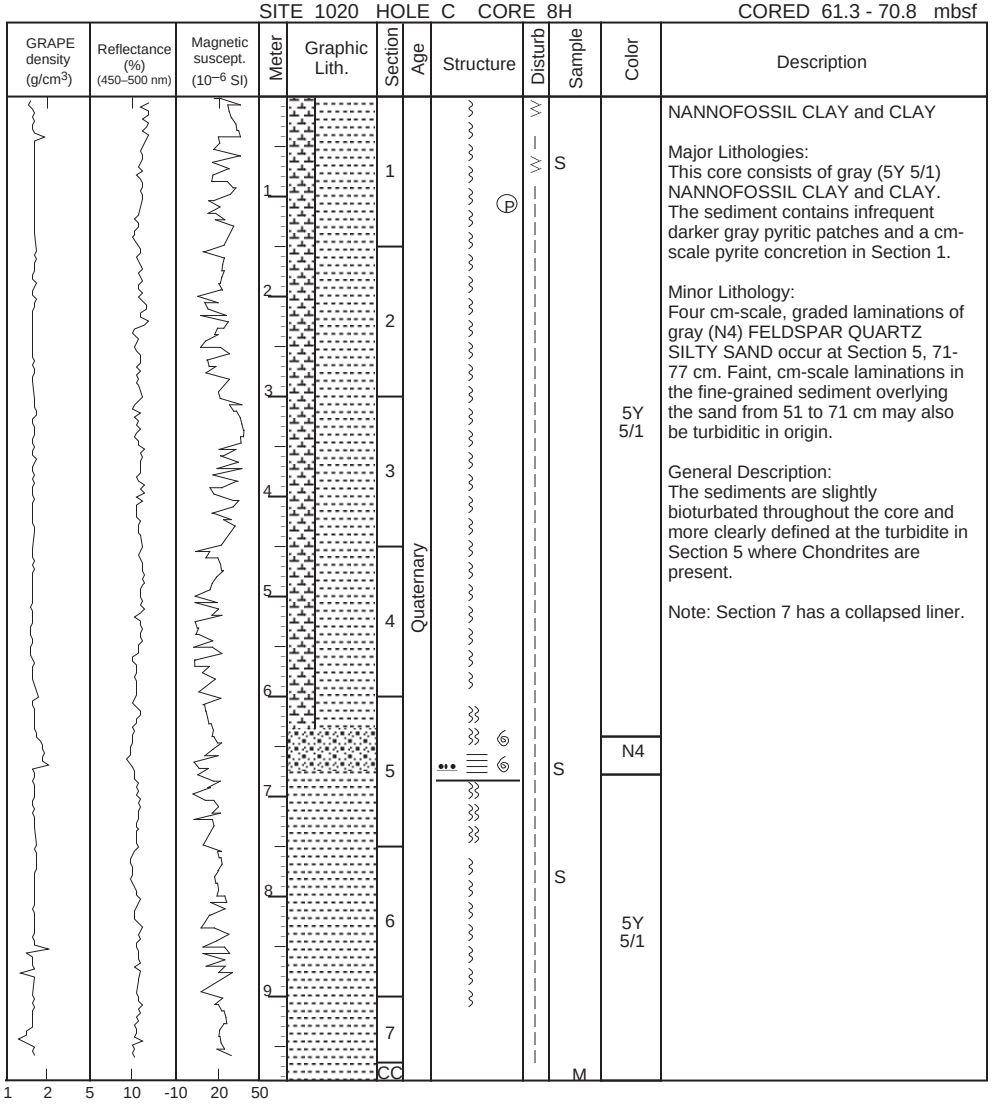
CLAYEY NANNOFOSSIL OOZE and NANNOFOSSIL OOZE WITH CLAY

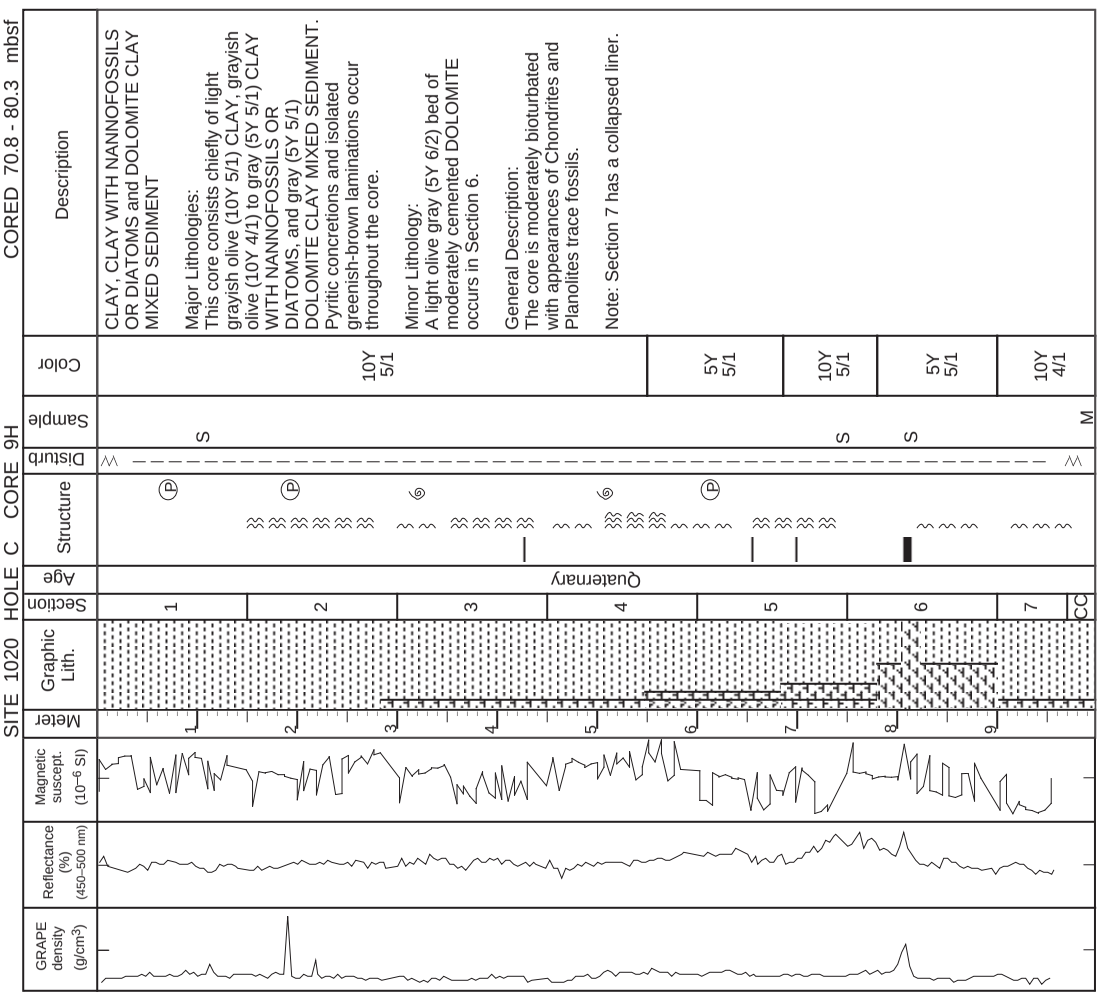
Major Lithologies:
This core consists of gray (5Y 6/1) to pale olive (10Y 6/1) CLAYEY NANNOFOSSIL OOZE and NANNOFOSSIL OOZE WITH CLAY. Diatoms and foraminifers compose <10% of the sediment.

General Description:
The sediments are mostly homogeneous to slightly bioturbated. Disseminated pyrite and pyritic concretions are present in this core.

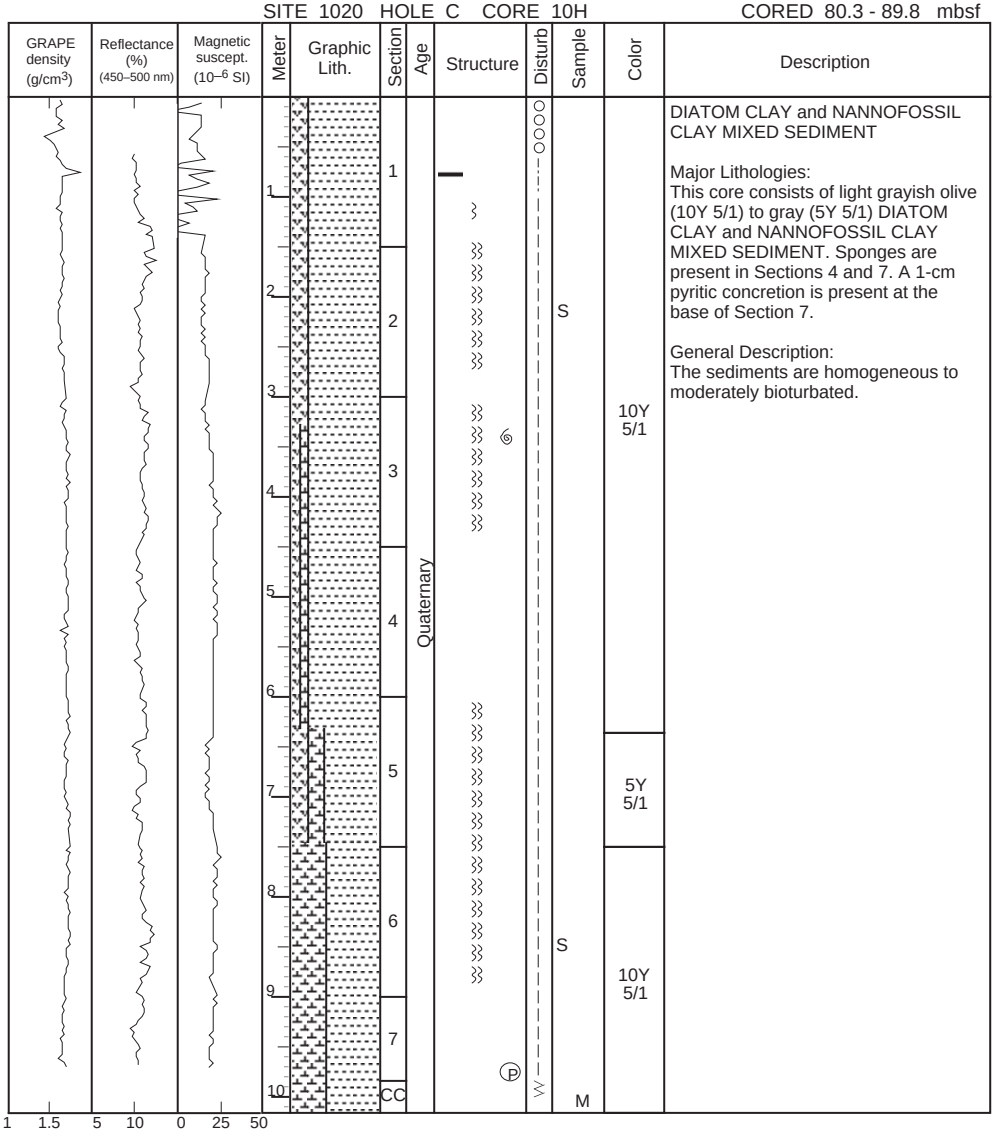

SITE 1020 HOLE C CORE 7H CORED 51.8 - 61.3 mbsf
GRAPE density (g/cm3)
Reflectance (%) (450–500 nm)
Magnetic suscept. (10–6 SI)
Meter
Graphic Lith.
Section
Age
Structure
Disturb
Sample
Color
Description
Quaternary
1
2
3
4
5
6
7
CC
10Y 5/1
10Y 6/1
10Y 5/1
5Y 5/1
S
S
M
CLAY WITH DIATOMS and CLAY NANNOFOSSIL MIXED SEDIMENT WITH FORAMINIFERS
Major Lithologies:
This core consists of gray (5Y 5/1) CLAY WITH DIATOMS and light grayish olive to pale olive (10Y 5/1 to 10Y 6/1) CLAY NANNOFOSSIL MIXED SEDIMENT WITH FORAMINIFERS. Pyrite concretions are present in Sections 2 and 3.
General Description:
The sediments are extensively mottled or bioturbated throughout. Chondrites and Zoophycos trace fossils are present.

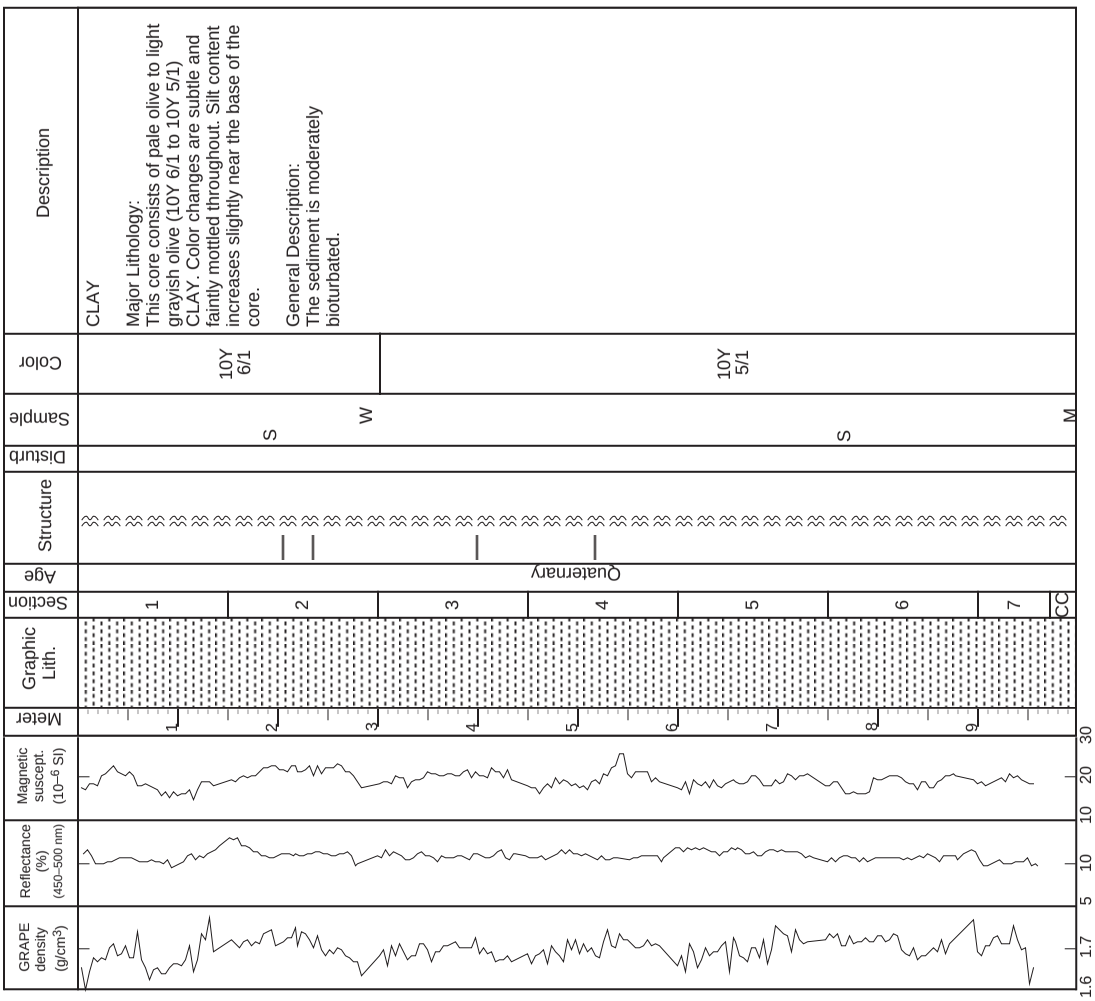
SITE 1020 HOLE C CORE 8H CORED 61.3 - 70.8 mbsf



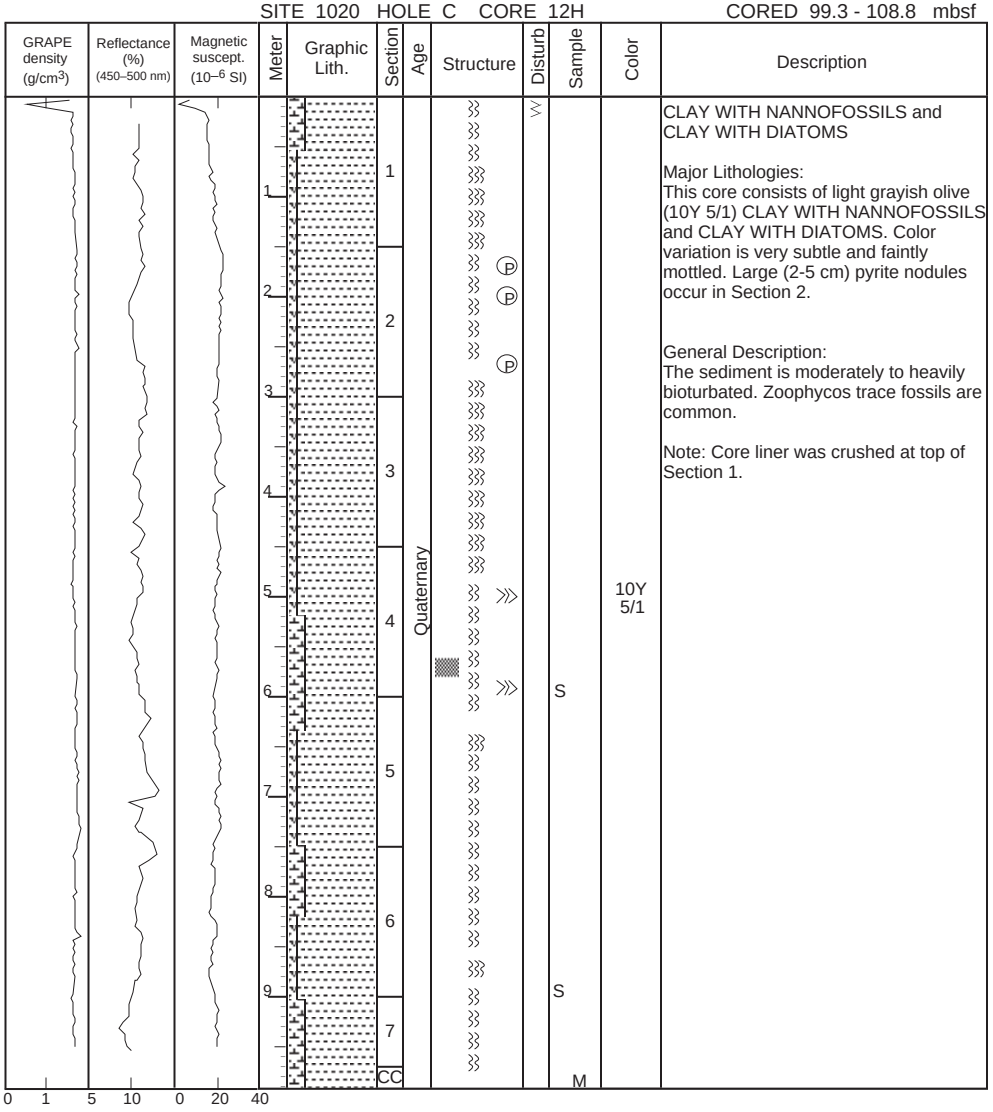

SITE 1020 HOLE C CORE 9H CORED 70.8 - 80.3 mbsf
GRAPE density (g/cm3)
Reflectance (%) (450–500 nm)
Magnetic suscept. (10–6 SI)
Meter
Graphic Lith.
Section
Age
Structure
Disturb
Sample
Color
Description
Quaternary
10Y 5/1
5Y 5/1
10Y 5/1
5Y 5/1
10Y 4/1
CLAY, CLAY WITH NANNOFOSSILS OR DIATOMS and DOLOMITE CLAY MIXED SEDIMENT
Major Lithologies:
This core consists chiefly of light grayish olive (10Y 5/1) CLAY, grayish olive (10Y 4/1) to gray (5Y 5/1) CLAY WITH NANNOFOSSILS OR DIATOMS, and gray (5Y 5/1) DOLOMITE CLAY MIXED SEDIMENT.
Pyritic concretions and isolated greenish-brown laminations occur throughout the core.
Minor Lithology:
A light olive gray (5Y 6/2) bed of moderately cemented DOLOMITE occurs in Section 6.
General Description:
The core is moderately bioturbated with appearances of Chondrites and Planolites trace fossils.
Note: Section 7 has a collapsed liner.

SITE 1020 HOLE C CORE 10H CORED 80.3 - 89.8 mbsf




SITE 1020 HOLE C CORE 11H CORED 89.8 - 99.3 mbsf
GRAPE density (g/cm³)
Reflectance (%) (450–500 nm)
Magnetic suscept. (10⁻⁶ SI)
Meter
Graphic Lith.
Section
Age
Structure
Disturb
Sample
Color
Description
Quaternary
10Y 6/1
10Y 5/1
CLAY
Major Lithology:
This core consists of pale olive to light gravish olive (10Y 6/1 to 10Y 5/1) CLAY. Color changes are subtle and faintly mottled throughout. Silt content increases slightly near the base of the core.
General Description:
The sediment is moderately bioturbated.

SITE 1020 HOLE C CORE 12H CORED 99.3 - 108.8 mbsf



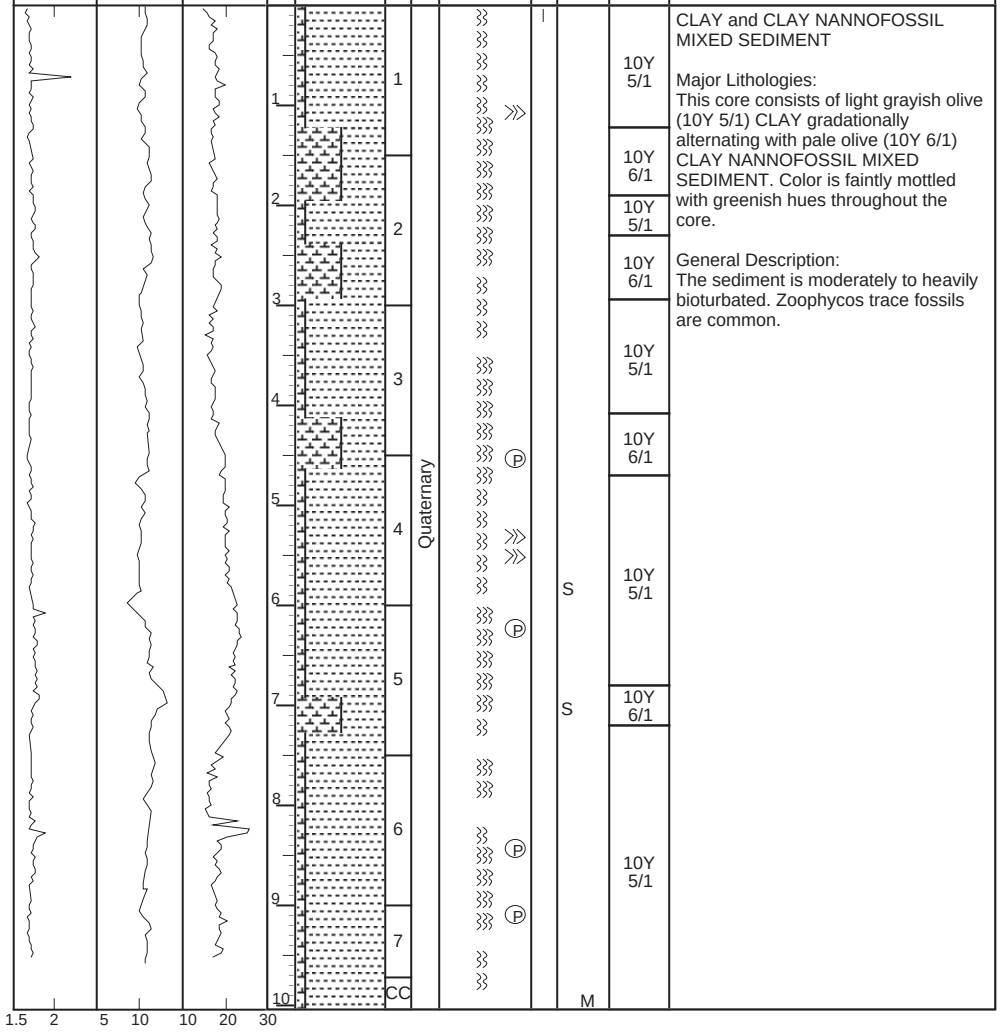
CLAY WITH NANNOFOSSILS and CLAY WITH DIATOMS

Major Lithologies:
This core consists of light grayish olive (10Y 5/1) CLAY WITH NANNOFOSSILS and CLAY WITH DIATOMS. Color variation is very subtle and faintly mottled. Large (2-5 cm) pyrite nodules occur in Section 2.

General Description:
The sediment is moderately to heavily bioturbated. Zoophycos trace fossils are common.

Note: Core liner was crushed at top of Section 1.

SITE 1020 HOLE C CORE 13H CORED 108.8 - 118.3 mbsf

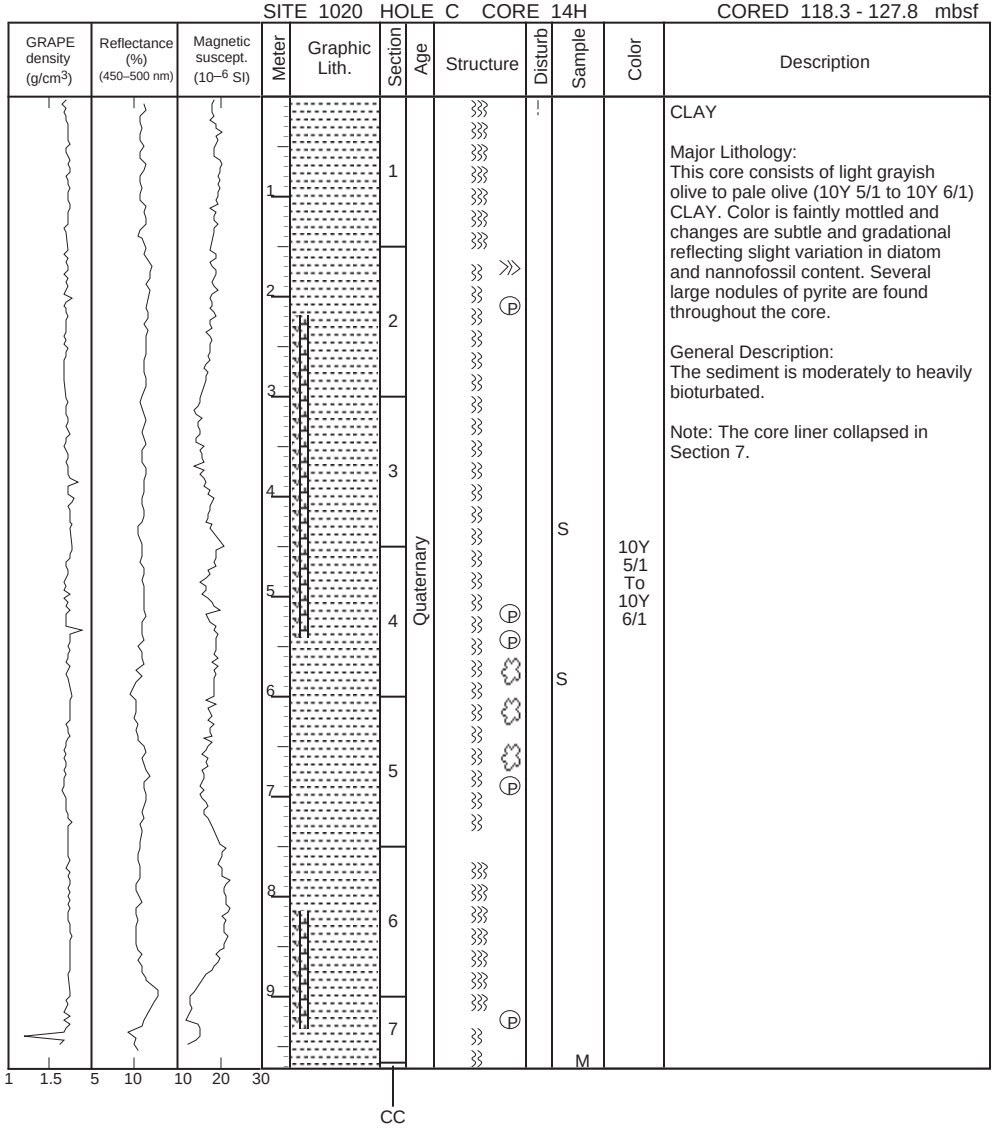


CLAY and CLAY NANNOFOSSIL MIXED SEDIMENT

Major Lithologies:
This core consists of light grayish olive (10Y 5/1) CLAY gradationally alternating with pale olive (10Y 6/1) CLAY NANNOFOSSIL MIXED SEDIMENT. Color is faintly mottled with greenish hues throughout the core.

General Description:
The sediment is moderately to heavily bioturbated. Zoophycos trace fossils are common.

SITE 1020 HOLE C CORE 14H CORED 118.3 - 127.8 mbsf



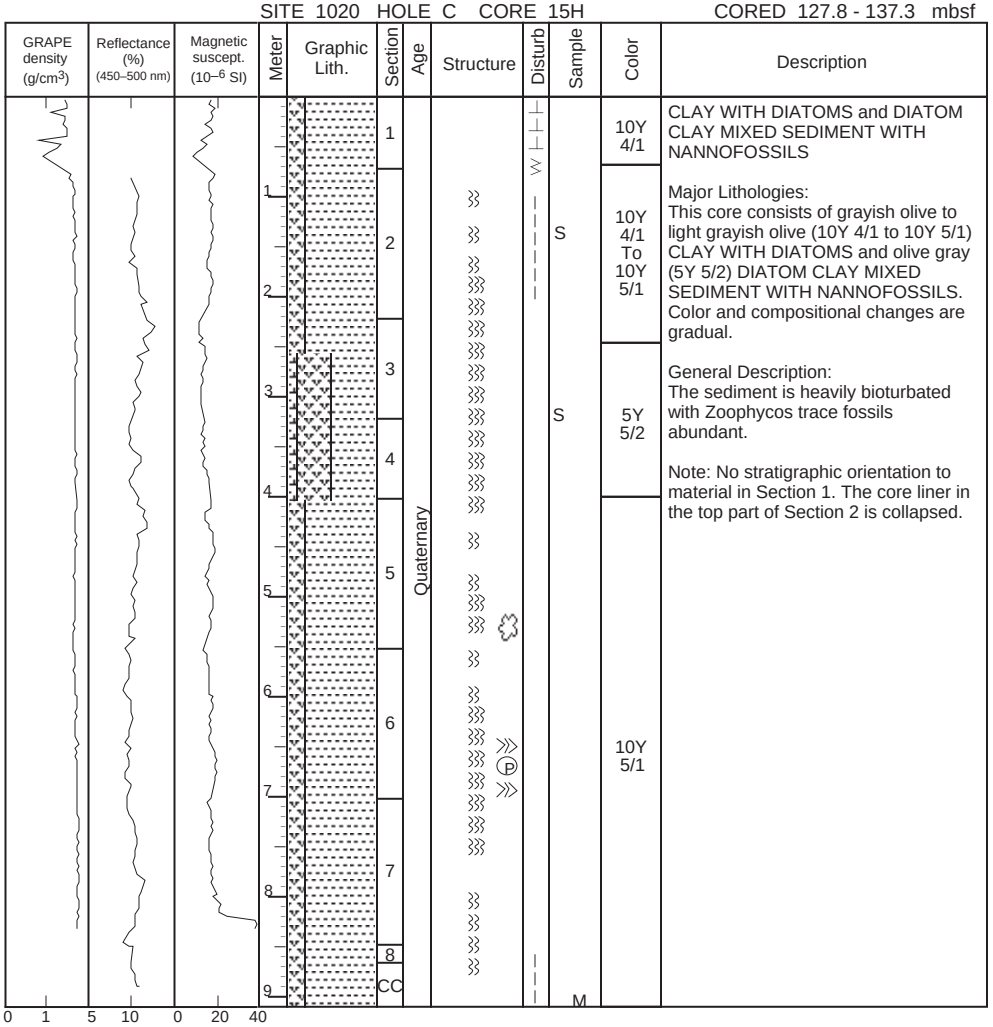
CLAY

Major Lithology:
This core consists of light grayish olive to pale olive (10Y 5/1 to 10Y 6/1) CLAY. Color is faintly mottled and changes are subtle and gradational reflecting slight variation in diatom and nannofossil content. Several large nodules of pyrite are found throughout the core.

General Description:
The sediment is moderately to heavily bioturbated.

Note: The core liner collapsed in Section 7.

SITE 1020 HOLE C CORE 15H CORED 127.8 - 137.3 mbsf



CLAY WITH DIATOMS and DIATOM CLAY MIXED SEDIMENT WITH NANNOFOSSILS

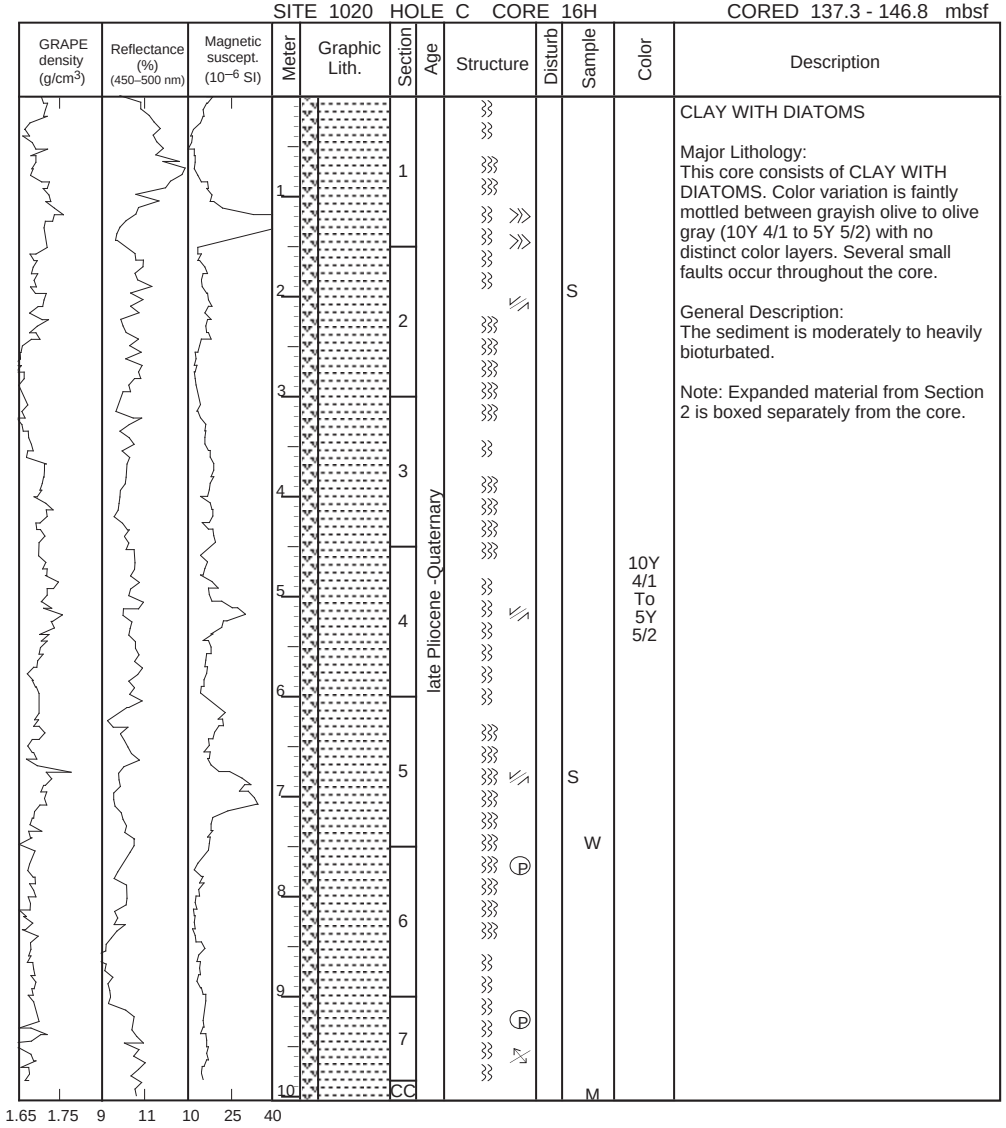
Major Lithologies:
This core consists of grayish olive to light grayish olive (10Y 4/1 to 10Y 5/1) CLAY WITH DIATOMS and olive gray (5Y 5/2) DIATOM CLAY MIXED SEDIMENT WITH NANNOFOSSILS. Color and compositional changes are gradual.

General Description:
The sediment is heavily bioturbated with Zoophycos trace fossils abundant.

Note: No stratigraphic orientation to material in Section 1. The core liner in the top part of Section 2 is collapsed.

SITE 1020

SITE 1020 HOLE C CORE 16H CORED 137.3 - 146.8 mbsf

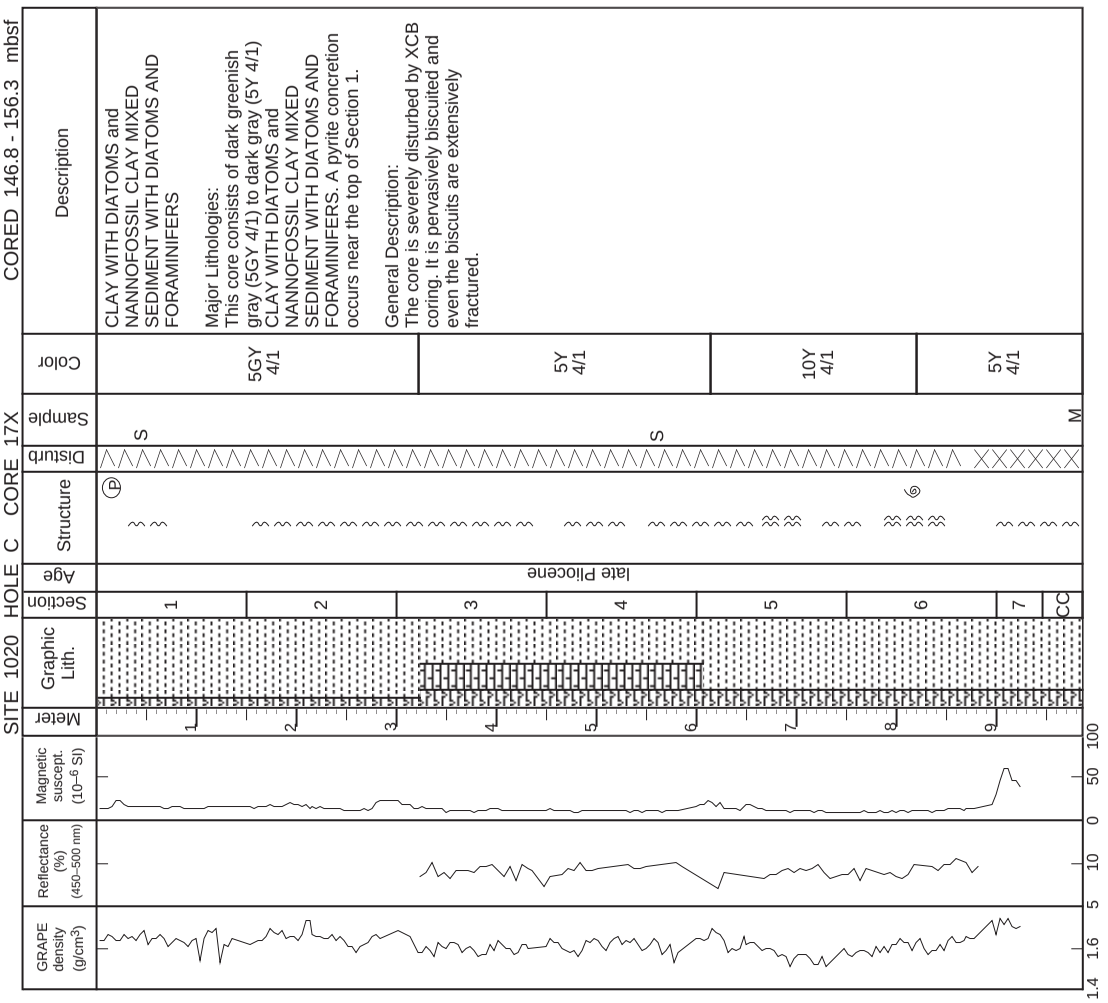


CLAY WITH DIATOMS

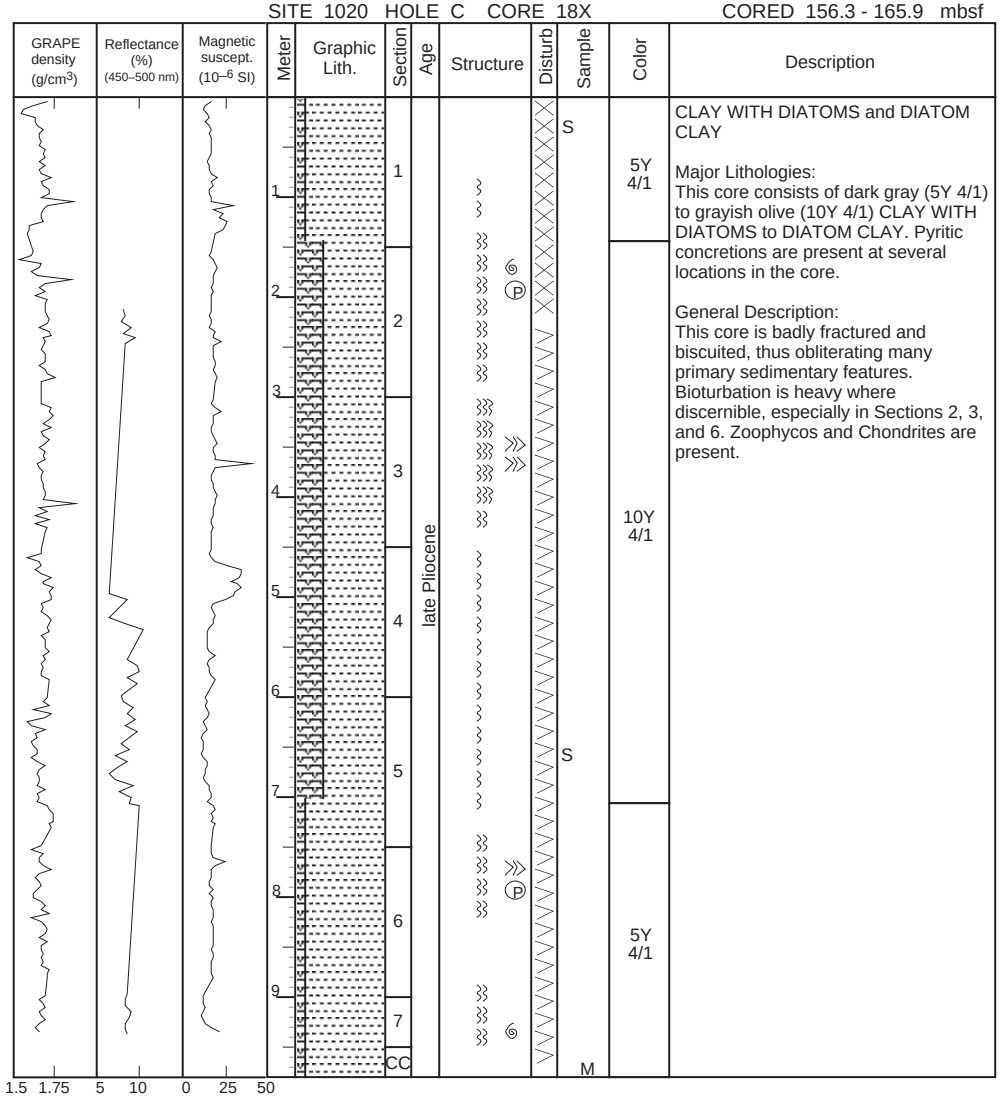
Major Lithology:
This core consists of CLAY WITH DIATOMS. Color variation is faintly mottled between grayish olive to olive gray (10Y 4/1 to 5Y 5/2) with no distinct color layers. Several small faults occur throughout the core.

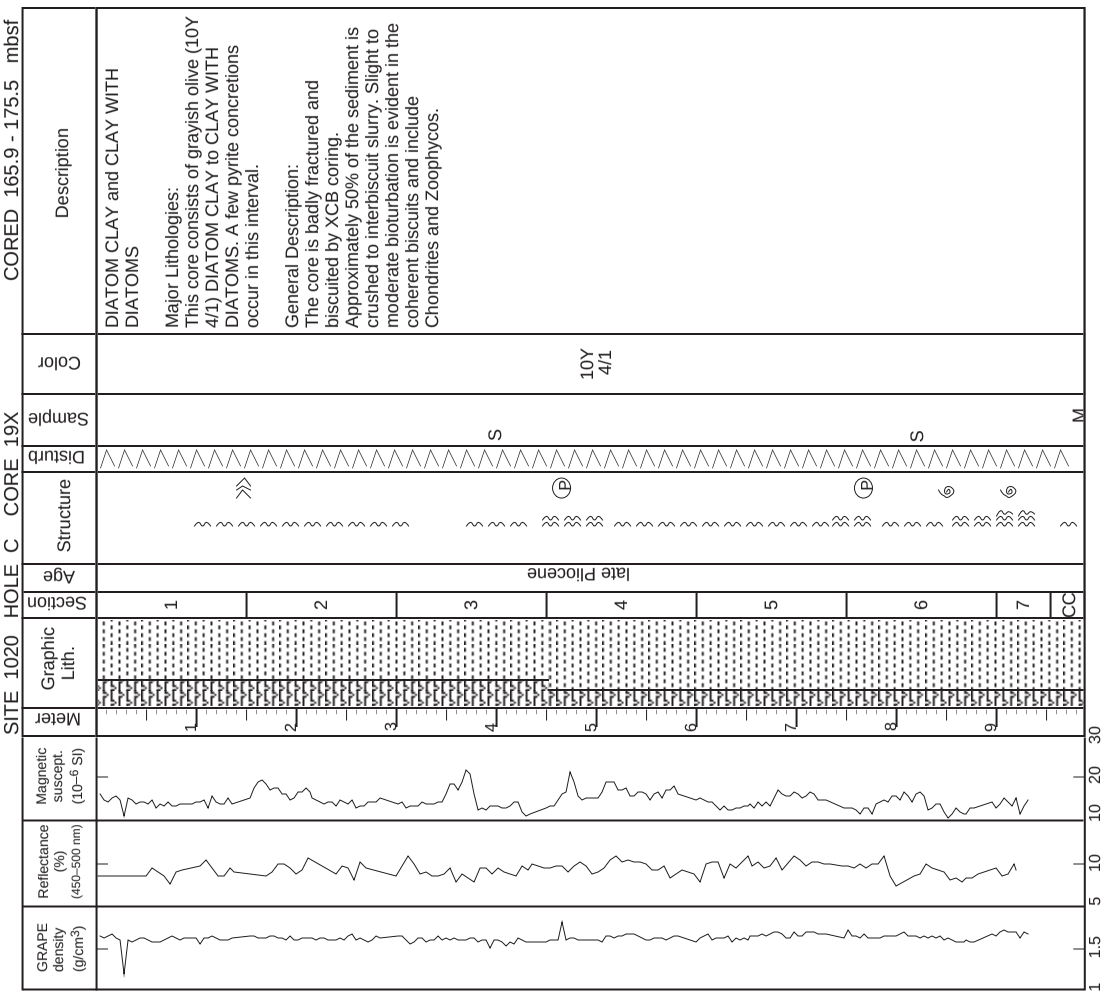
General Description:
The sediment is moderately to heavily bioturbated.

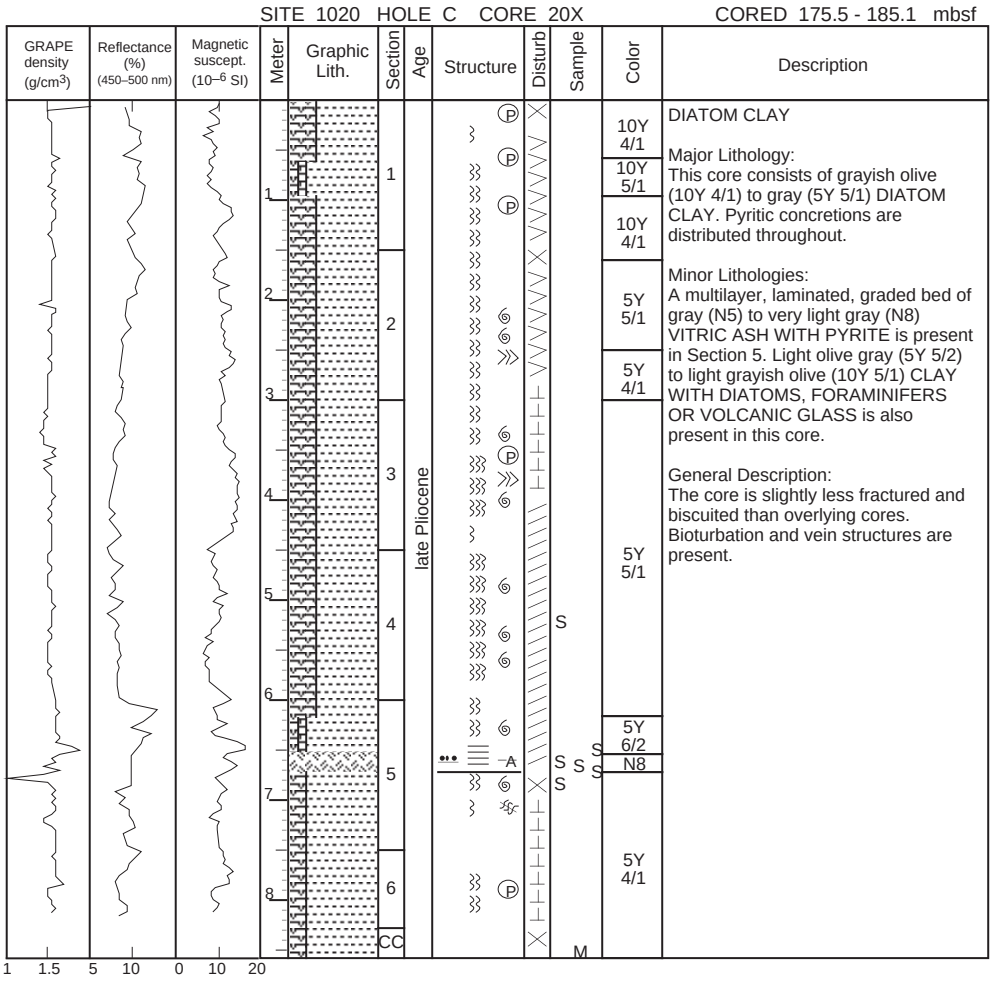
Note: Expanded material from Section 2 is boxed separately from the core.

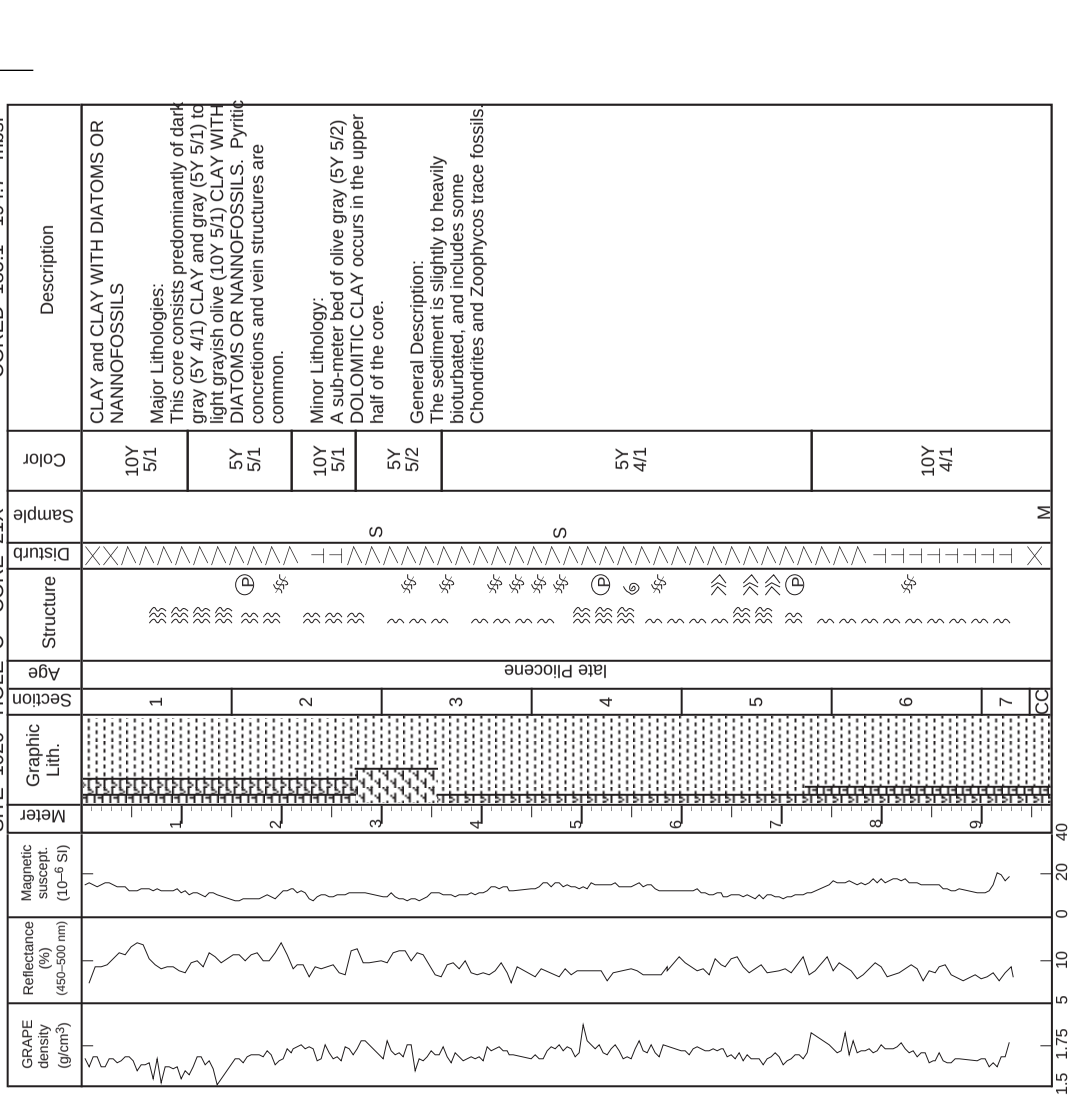

SITE 1020 HOLE C CORE 17X CORED 146.8 - 156.3 mbsf
GRAPE density (g/cm³)
Reflectance (%) (450–500 nm)
Magnetic suscept. (10⁻⁶ SI)
Meter
Graphic Lith.
Section
Age
Structure
Disturb
Sample
Color
Description
late Pliocene
5GY 4/1
5Y 4/1
10Y 4/1
5Y 4/1
CLAY WITH DIATOMS and NANNOFOSSIL CLAY MIXED SEDIMENT WITH DIATOMS AND FORAMINIFERS
Major Lithologies:
This core consists of dark greenish gray (5GY 4/1) to dark gray (5Y 4/1) CLAY WITH DIATOMS and NANNOFOSSIL CLAY MIXED SEDIMENT WITH DIATOMS AND FORAMINIFERS. A pyrite concretion occurs near the top of Section 1.
General Description:
The core is severely disturbed by XCB coring. It is pervasively biscuited and even the biscuits are extensively fractured.

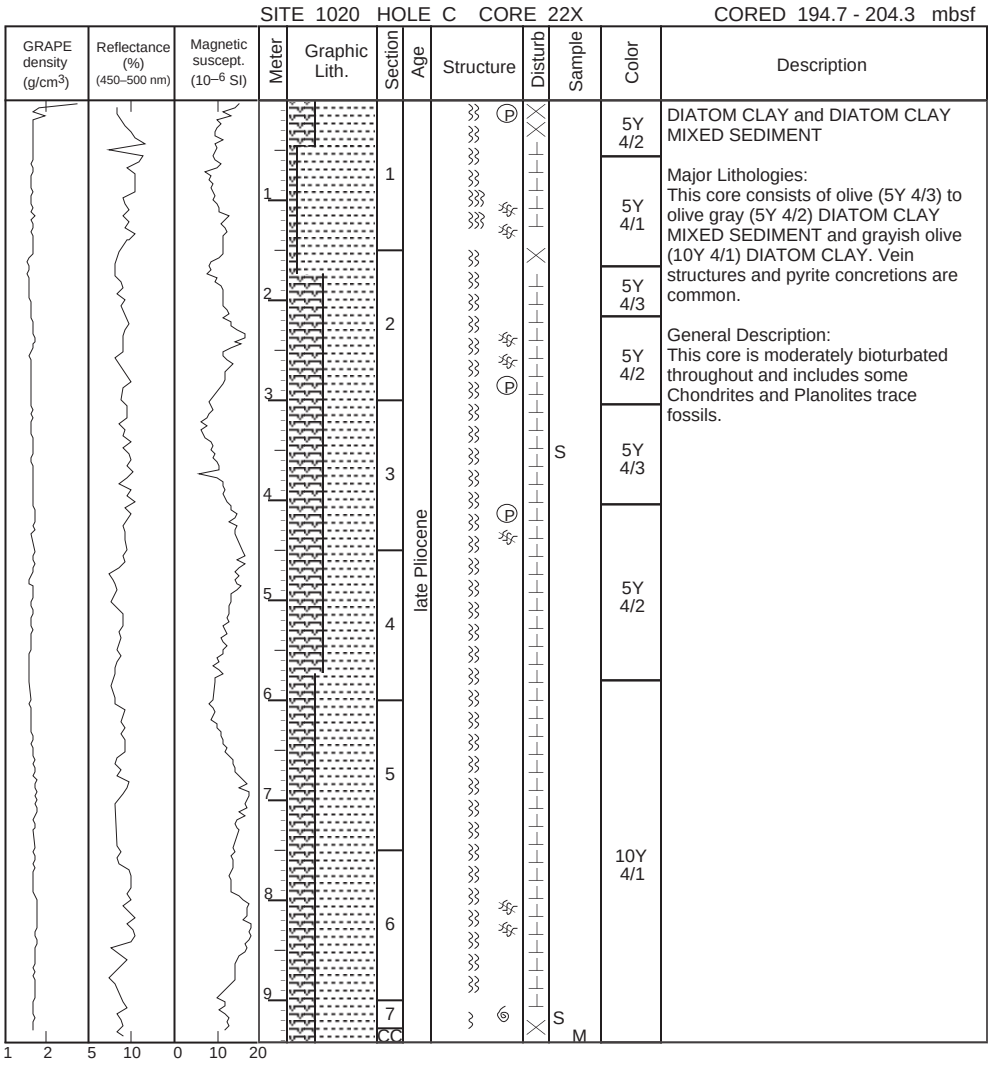
SITE 1020 HOLE C CORE 18X CORED 156.3 - 165.9 mbsf



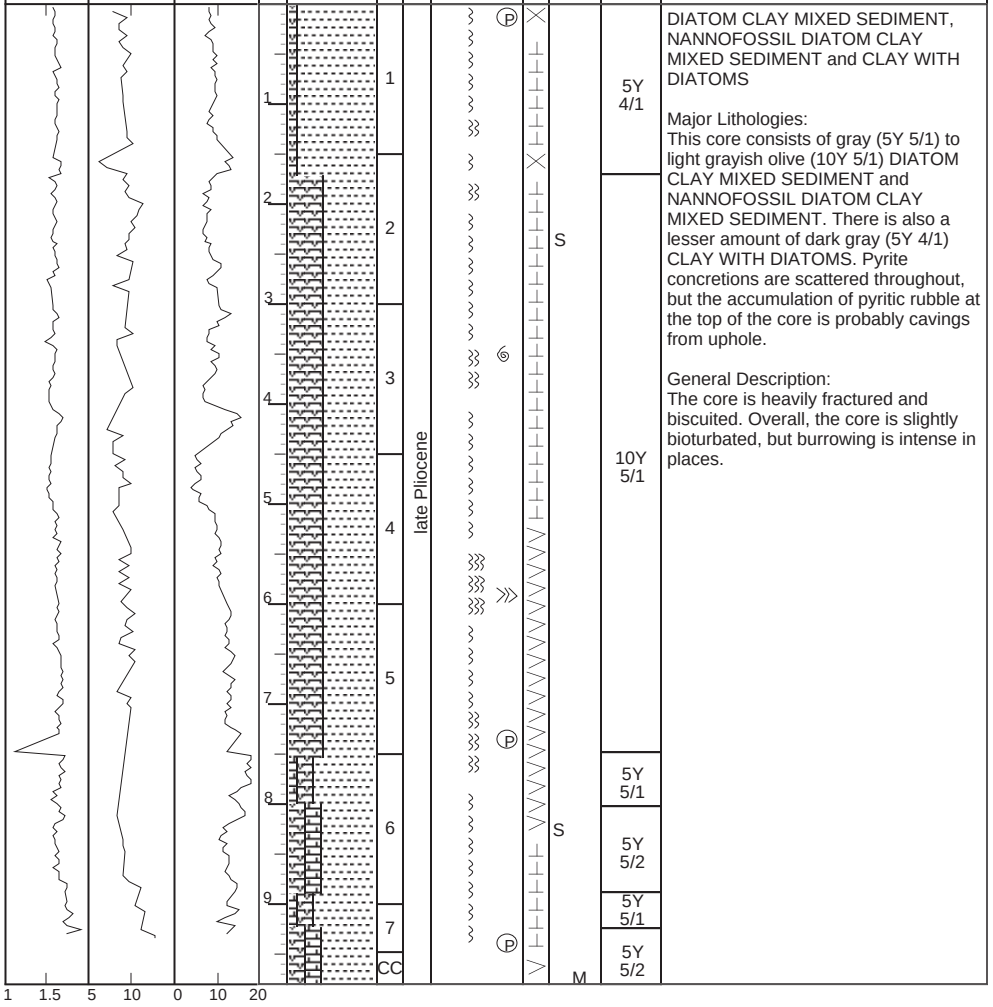

SITE 1020 HOLE C CORE 19X CORED 165.9 - 175.5 mbsf
GRAPE density (g/cm3)
Reflectance (%) (450–500 nm)
Magnetic suscept. (10–6 SI)
Meter
Graphic Lith.
Section
Age
Structure
Disturb
Sample
Color
Description
late Pliocene
10Y 4/1
DIATOM CLAY and CLAY WITH DIATOMS
Major Lithologies:
This core consists of grayish olive (10Y 4/1) DIATOM CLAY to CLAY WITH DIATOMS. A few pyrite concretions occur in this interval.
General Description:
The core is badly fractured and biscuited by XCB coring.
Approximately 50% of the sediment is crushed to interbiscuit slurry. Slight to moderate bioturbation is evident in the coherent biscuits and include Chondrites and Zoophycos.


SITE 1020 HOLE C CORE 20X
CORED 175.5 - 185.1 mbsf
GRAPE density (g/cm3)
Reflectance (%) (450–500 nm)
Magnetic suscept. (10–6 SI)
Meter
Graphic Lith.
Section
Age
Structure
Disturb
Sample
Color
Description
late Pliocene
CC
10Y 4/1
10Y 5/1
10Y 4/1
5Y 5/1
5Y 4/1
5Y 5/1
5Y 6/2
N8
5Y 4/1
DIATOM CLAY
Major Lithology:
This core consists of grayish olive (10Y 4/1) to gray (5Y 5/1) DIATOM CLAY. Pyritic concretions are distributed throughout.
Minor Lithologies:
A multilayer, laminated, graded bed of gray (N5) to very light gray (N8) VITRIC ASH WITH PYRITE is present in Section 5. Light olive gray (5Y 5/2) to light grayish olive (10Y 5/1) CLAY WITH DIATOMS, FORAMINIFERS OR VOLCANIC GLASS is also present in this core.
General Description:
The core is slightly less fractured and biscuited than overlying cores. Bioturbation and vein structures are present.
1 1.5 5 10 0 10 20

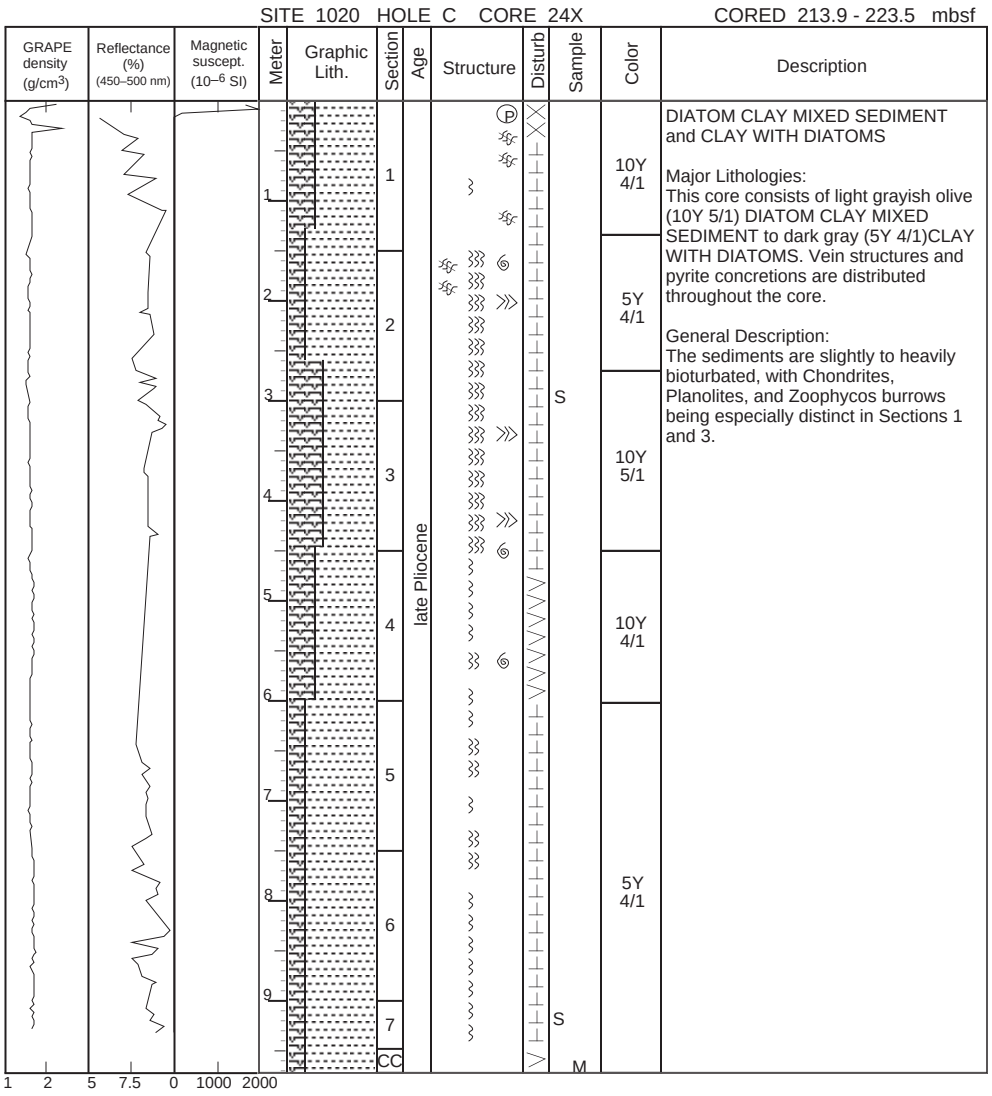

SITE 1020 HOLE C CORE 21X CORED 185.1 - 194.7 mbsf
GRAPE density (g/cm³)
Reflectance (%) (450–500 nm)
Magnetic suscept. (10⁻⁶ SI)
Meter
Graphic Lith.
Section
Age
Structure
Disturb
Sample
Color
Description
late Pliocene
10Y 5/1
5Y 5/1
10Y 5/1
5Y 5/2
5Y 4/1
10Y 4/1
CLAY and CLAY WITH DIATOMS OR NANNOFOSSILS
Major Lithologies:
This core consists predominantly of dark gray (5Y 4/1) CLAY and gray (5Y 5/1) to light grayish olive (10Y 5/1) CLAY WITH DIATOMS OR NANNOFOSSILS. Pyritic concretions and vein structures are common.
Minor Lithology:
A sub-meter bed of olive gray (5Y 5/2) DOLOMITIC CLAY occurs in the upper half of the core.
General Description:
The sediment is slightly to heavily bioturbated, and includes some Chondrites and Zoophycos trace fossils.

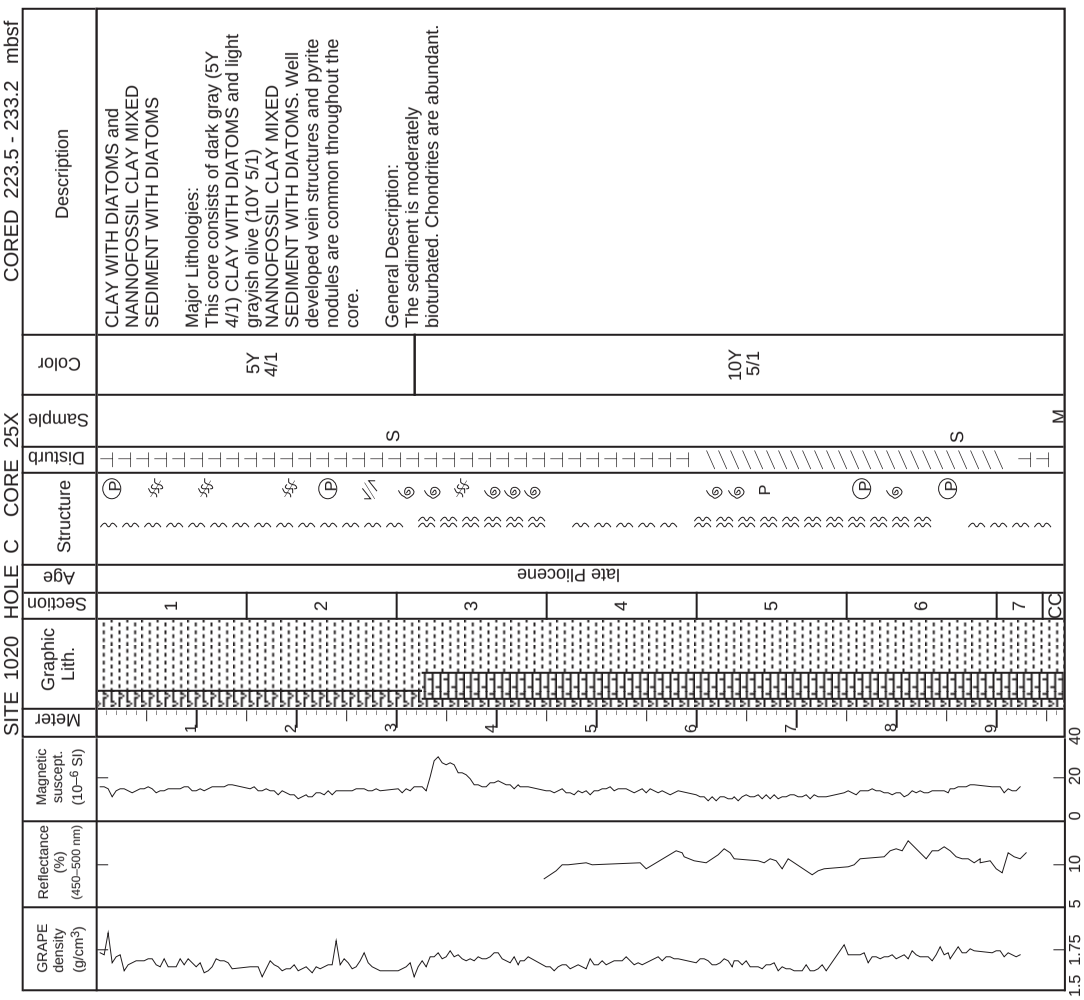

SITE 1020 HOLE C CORE 22X
CORED 194.7 - 204.3 mbsf
GRAPE density (g/cm3)
Reflectance (%) (450–500 nm)
Magnetic suscept. (10–6 SI)
Meter
Graphic Lith.
Section
Age
Structure
Disturb
Sample
Color
Description
late Pliocene
5Y 4/2
5Y 4/1
5Y 4/3
5Y 4/2
5Y 4/3
5Y 4/2
10Y 4/1
DIATOM CLAY and DIATOM CLAY MIXED SEDIMENT
Major Lithologies:
This core consists of olive (5Y 4/3) to olive gray (5Y 4/2) DIATOM CLAY MIXED SEDIMENT and grayish olive (10Y 4/1) DIATOM CLAY. Vein structures and pyrite concretions are common.
General Description:
This core is moderately bioturbated throughout and includes some Chondrites and Planolites trace fossils.
1 2 5 10 0 10 20

SITE 1020 HOLE C CORE 23X CORED 204.3 - 213.9 mbsf

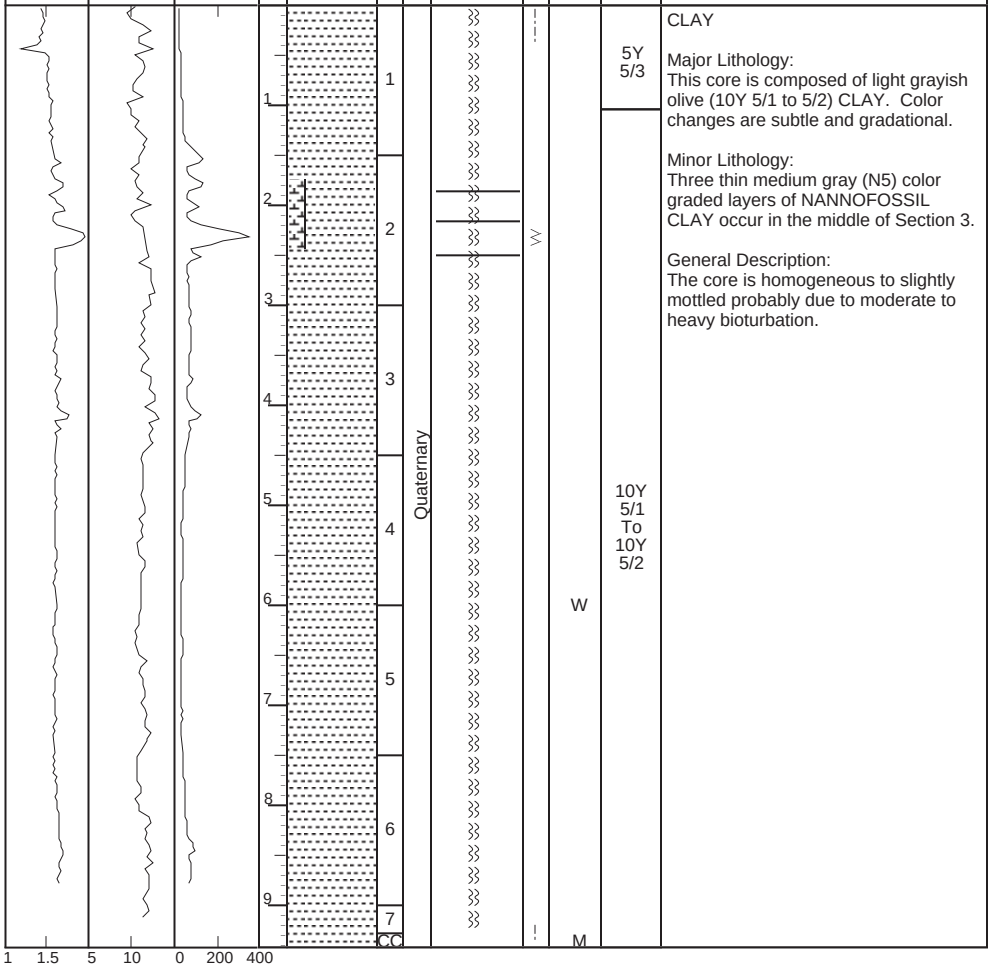


Description
DIATOM CLAY MIXED SEDIMENT, NANNOFOSSIL DIATOM CLAY MIXED SEDIMENT and CLAY WITH DIATOMS Major Lithologies: This core consists of gray (5Y 5/1) to light grayish olive (10Y 5/1) DIATOM CLAY MIXED SEDIMENT and NANNOFOSSIL DIATOM CLAY MIXED SEDIMENT. There is also a lesser amount of dark gray (5Y 4/1) CLAY WITH DIATOMS. Pyrite concretions are scattered throughout, but the accumulation of pyritic rubble at the top of the core is probably cavings from uphole. General Description: The core is heavily fractured and biscuited. Overall, the core is slightly bioturbated, but burrowing is intense in places.


SITE 1020 HOLE C CORE 24X
CORED 213.9 - 223.5 mbsf
GRAPE density (g/cm3)
Reflectance (%) (450–500 nm)
Magnetic suscept. (10–6 SI)
Meter
Graphic Lith.
Section
Age
Structure
Disturb
Sample
Color
Description
late Pliocene
10Y 4/1
5Y 4/1
10Y 5/1
10Y 4/1
5Y 4/1
S
S
M
CC
1 2 5 7.5 0 1000 2000
DIATOM CLAY MIXED SEDIMENT and CLAY WITH DIATOMS
Major Lithologies:
This core consists of light grayish olive (10Y 5/1) DIATOM CLAY MIXED SEDIMENT to dark gray (5Y 4/1)CLAY WITH DIATOMS. Vein structures and pyrite concretions are distributed throughout the core.
General Description:
The sediments are slightly to heavily bioturbated, with Chondrites, Planolites, and Zoophycos burrows being especially distinct in Sections 1 and 3.


SITE 1020 HOLE C CORE 25X CORED 223.5 - 233.2 mbsf
GRAPE density (g/cm3)
Reflectance (%) (450–500 nm)
Magnetic suscept. (10–6 SI)
Meter
Graphic Lith.
Section
Age
Structure
Disturb
Sample
Color
Description
late Pliocene
5Y 4/1
10Y 5/1
CLAY WITH DIATOMS and NANNOFOSSIL CLAY MIXED SEDIMENT WITH DIATOMS
Major Lithologies:
This core consists of dark gray (5Y 4/1) CLAY WITH DIATOMS and light grayish olive (10Y 5/1) NANNOFOSSIL CLAY MIXED SEDIMENT WITH DIATOMS. Well developed vein structures and pyrite nodules are common throughout the core.
General Description:
The sediment is moderately bioturbated. Chondrites are abundant.

SITE 1020 HOLE D CORE 1H CORED 0.0 - 9.4 mbsf



CLAY

Major Lithology:
This core is composed of light grayish olive (10Y 5/1 to 5/2) CLAY. Color changes are subtle and gradational.

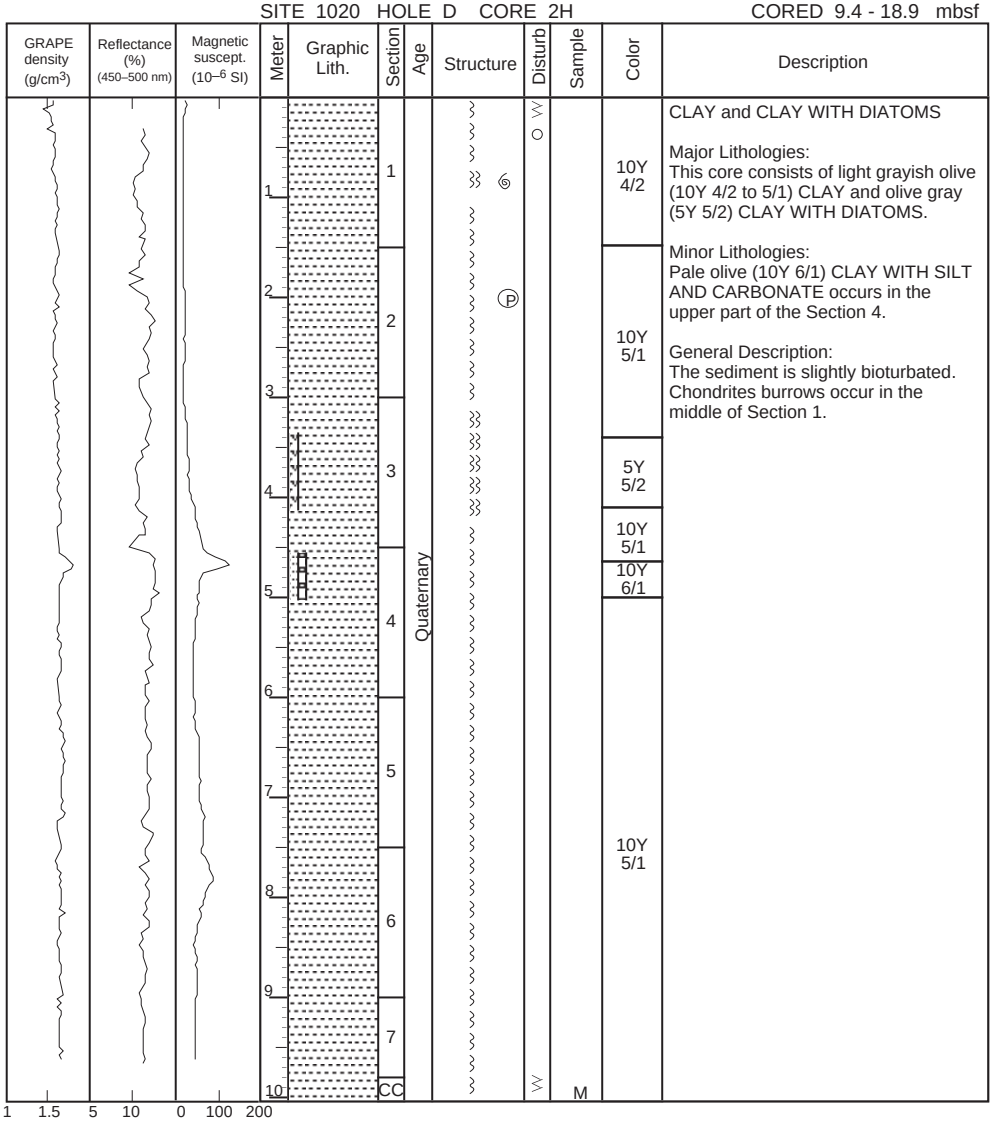
Minor Lithology:
Three thin medium gray (N5) color graded layers of NANNOFOSSIL CLAY occur in the middle of Section 3.

General Description:
The core is homogeneous to slightly mottled probably due to moderate to heavy bioturbation.

5Y 5/3

10Y 5/1 To 10Y 5/2

SITE 1020 HOLE D CORE 2H CORED 9.4 - 18.9 mbsf



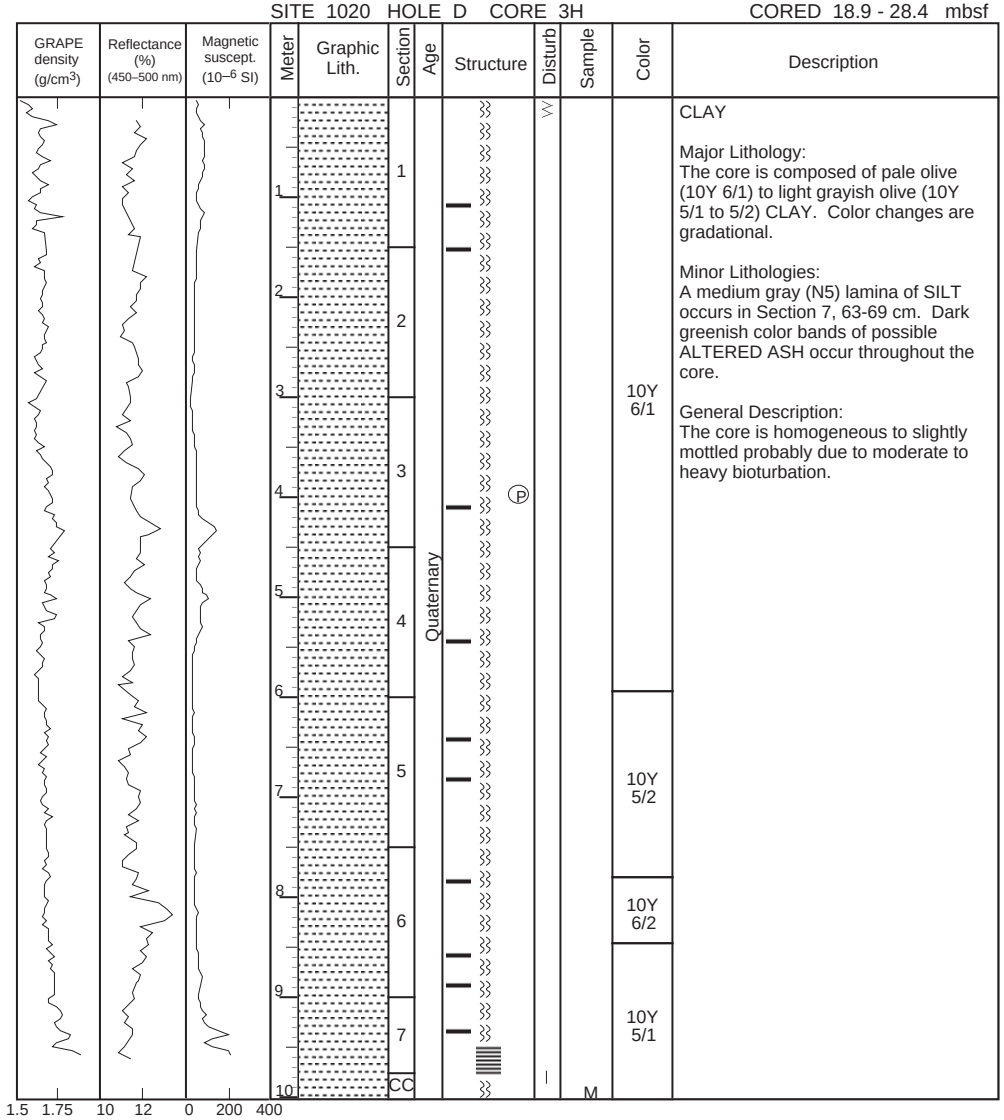
CLAY and CLAY WITH DIATOMS

Major Lithologies:
This core consists of light grayish olive (10Y 4/2 to 5/1) CLAY and olive gray (5Y 5/2) CLAY WITH DIATOMS.

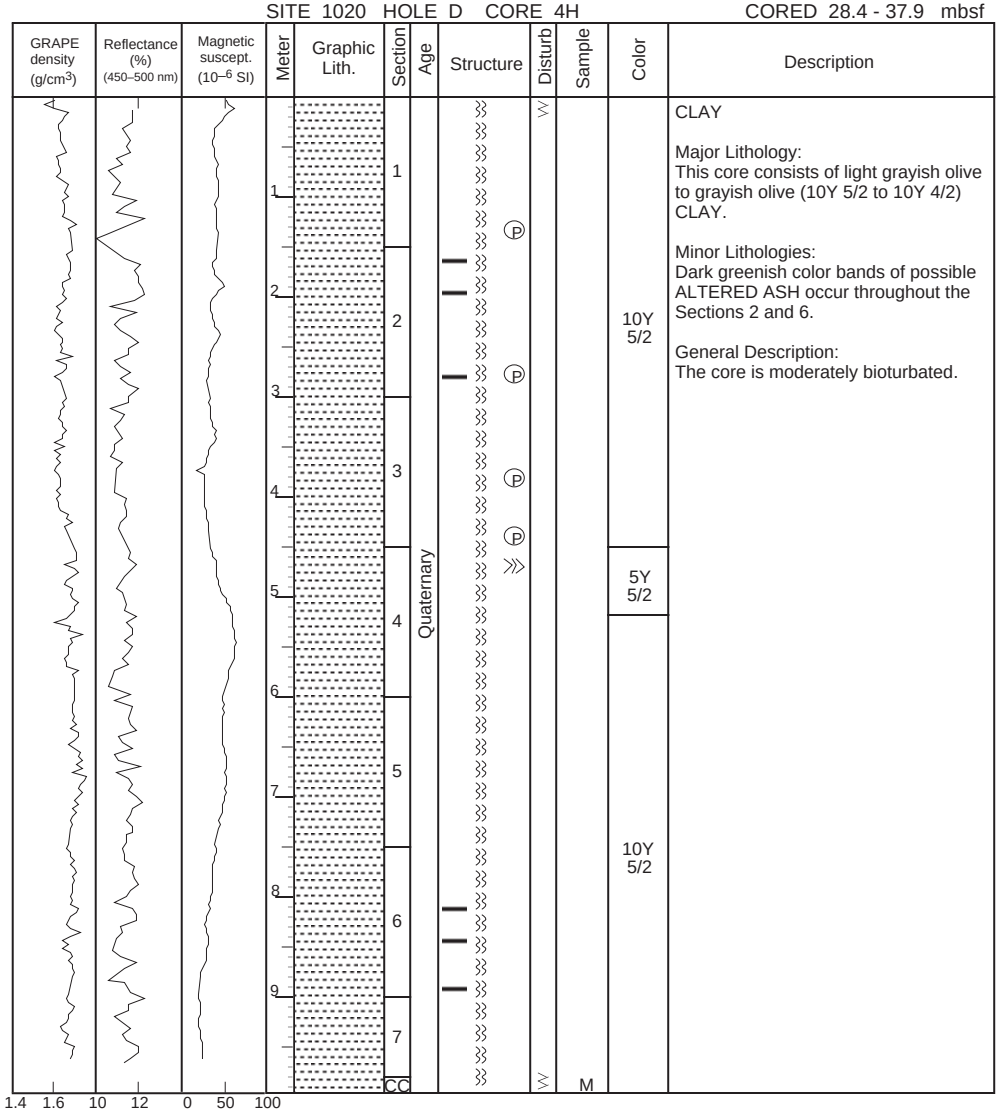
Minor Lithologies:
Pale olive (10Y 6/1) CLAY WITH SILT AND CARBONATE occurs in the upper part of the Section 4.

General Description:
The sediment is slightly bioturbated. Chondrites burrows occur in the middle of Section 1.

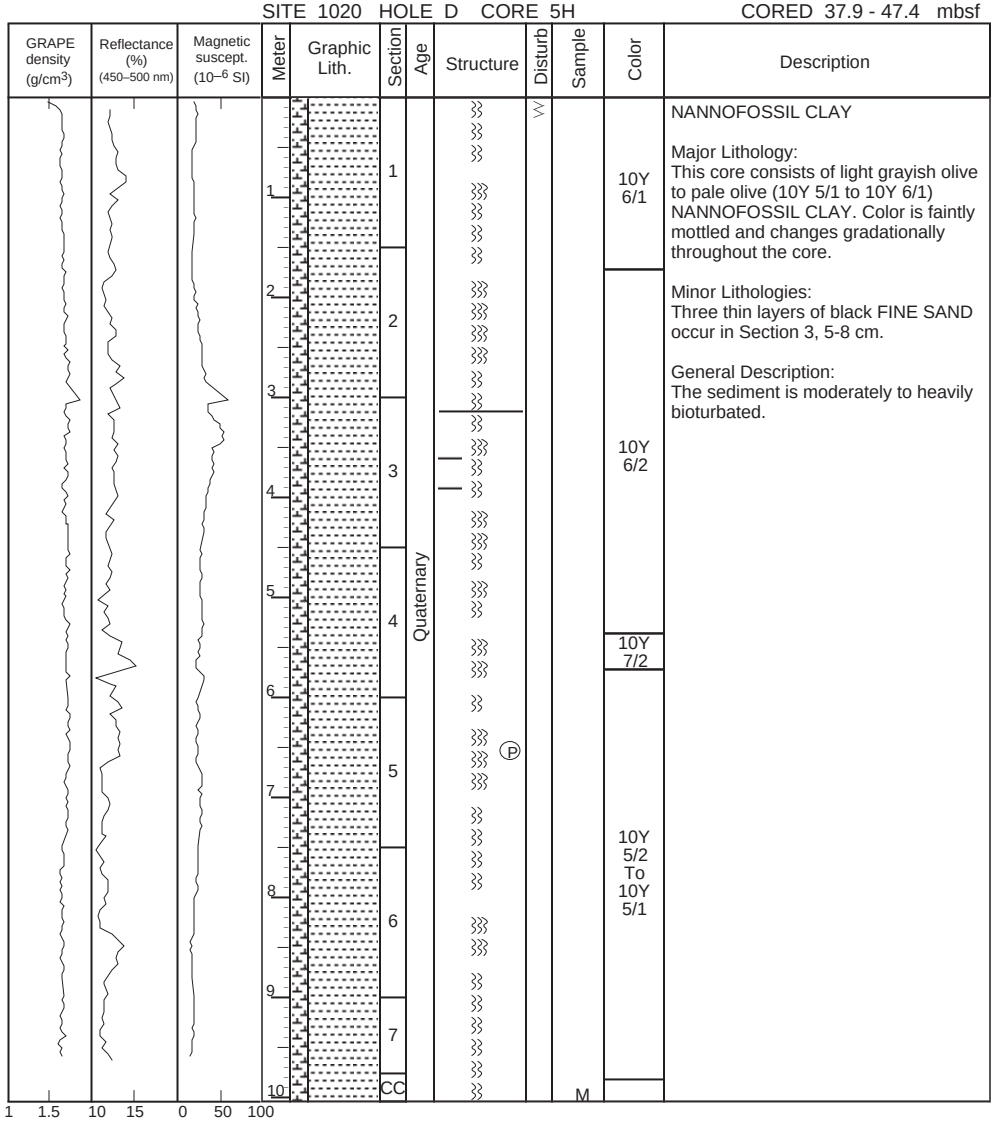
SITE 1020 HOLE D CORE 3H CORED 18.9 - 28.4 mbsf



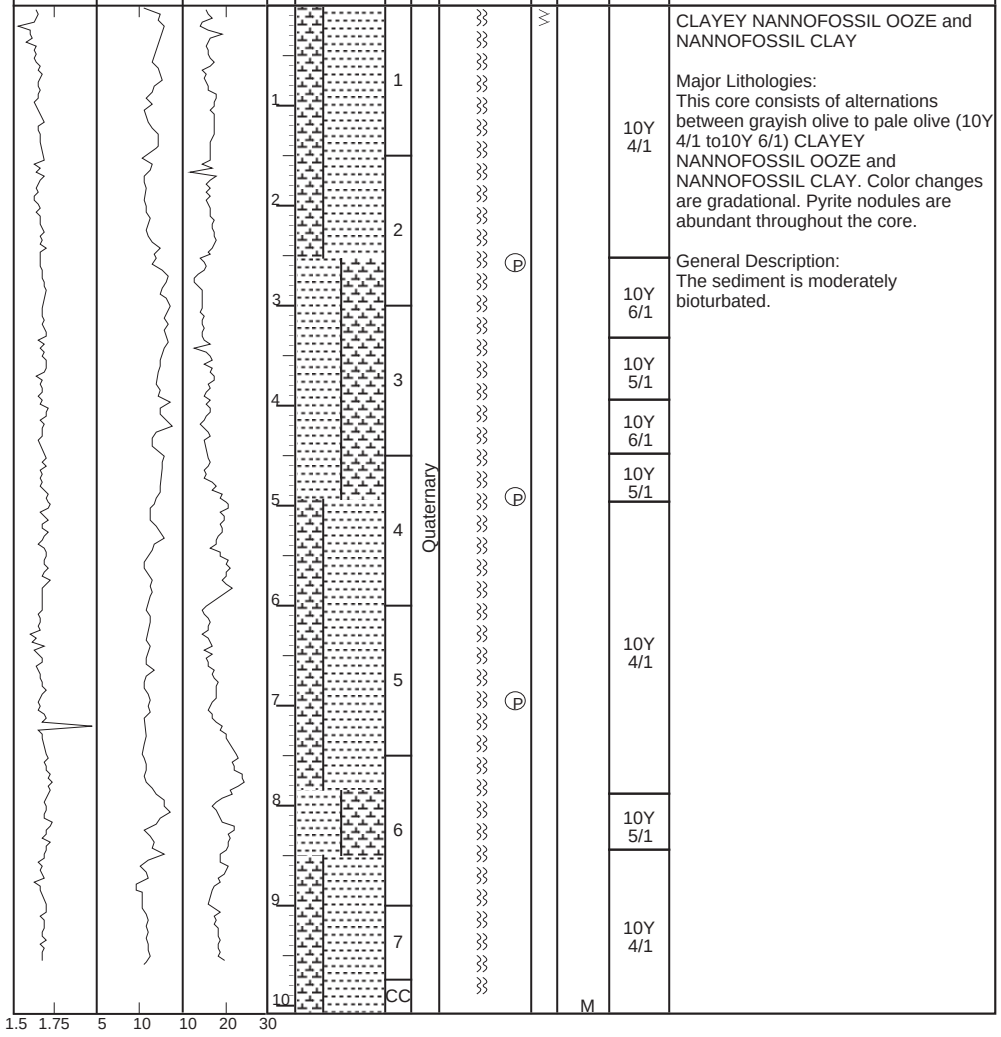
SITE 1020 HOLE D CORE 4H CORED 28.4 - 37.9 mbsf



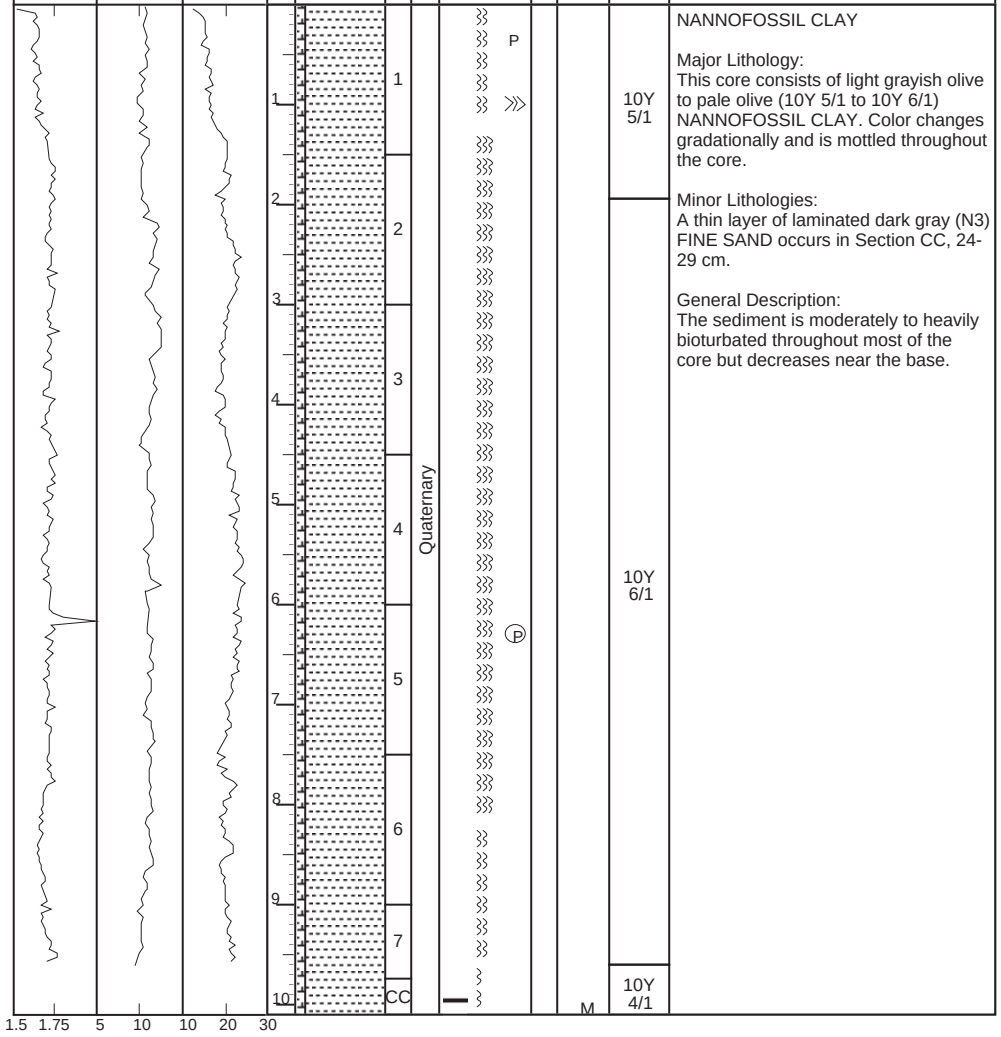
SITE 1020 HOLE D CORE 5H CORED 37.9 - 47.4 mbsf



SITE 1020 HOLE D CORE 6H CORED 47.4 - 56.9 mbsf



SITE 1020 HOLE D CORE 7H CORED 56.9 - 66.4 mbsf

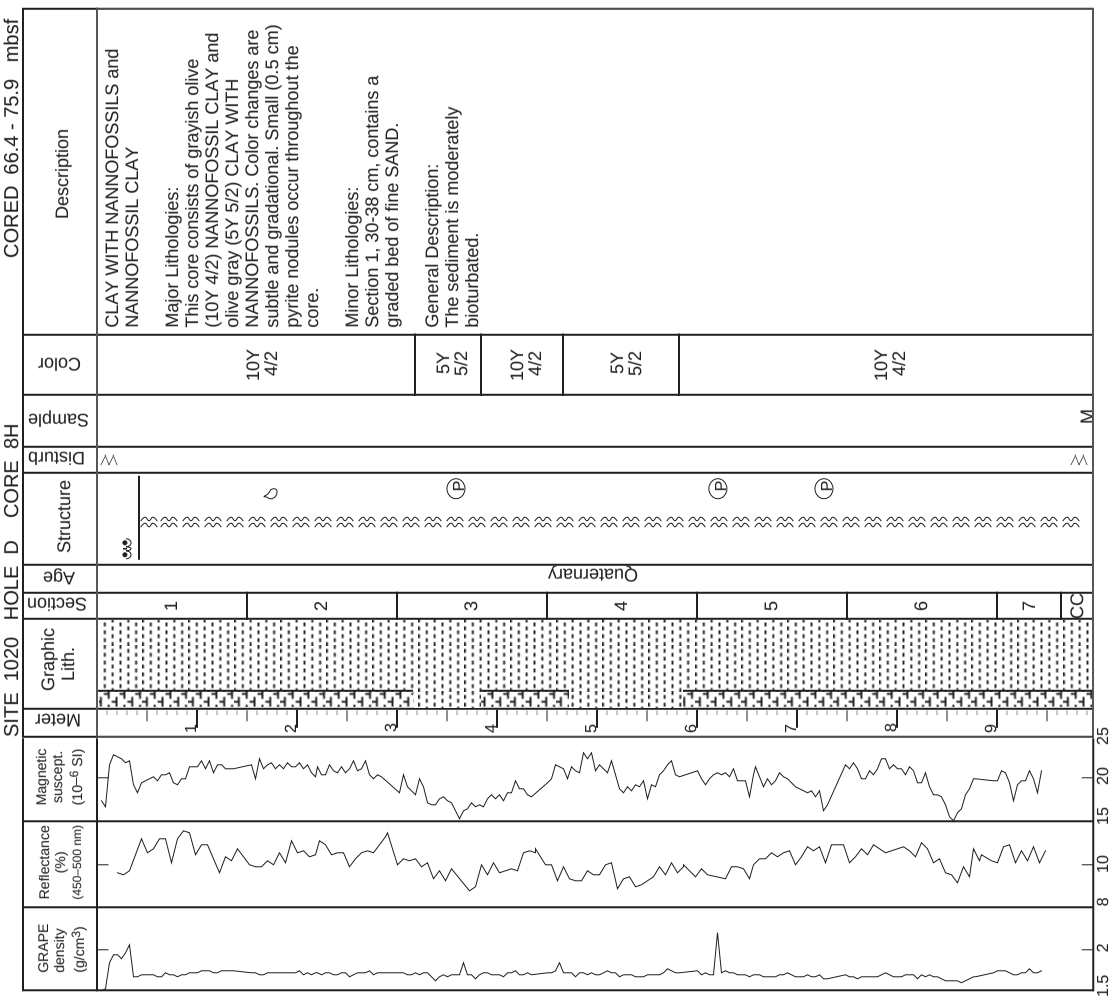


NANNOFOSSIL CLAY

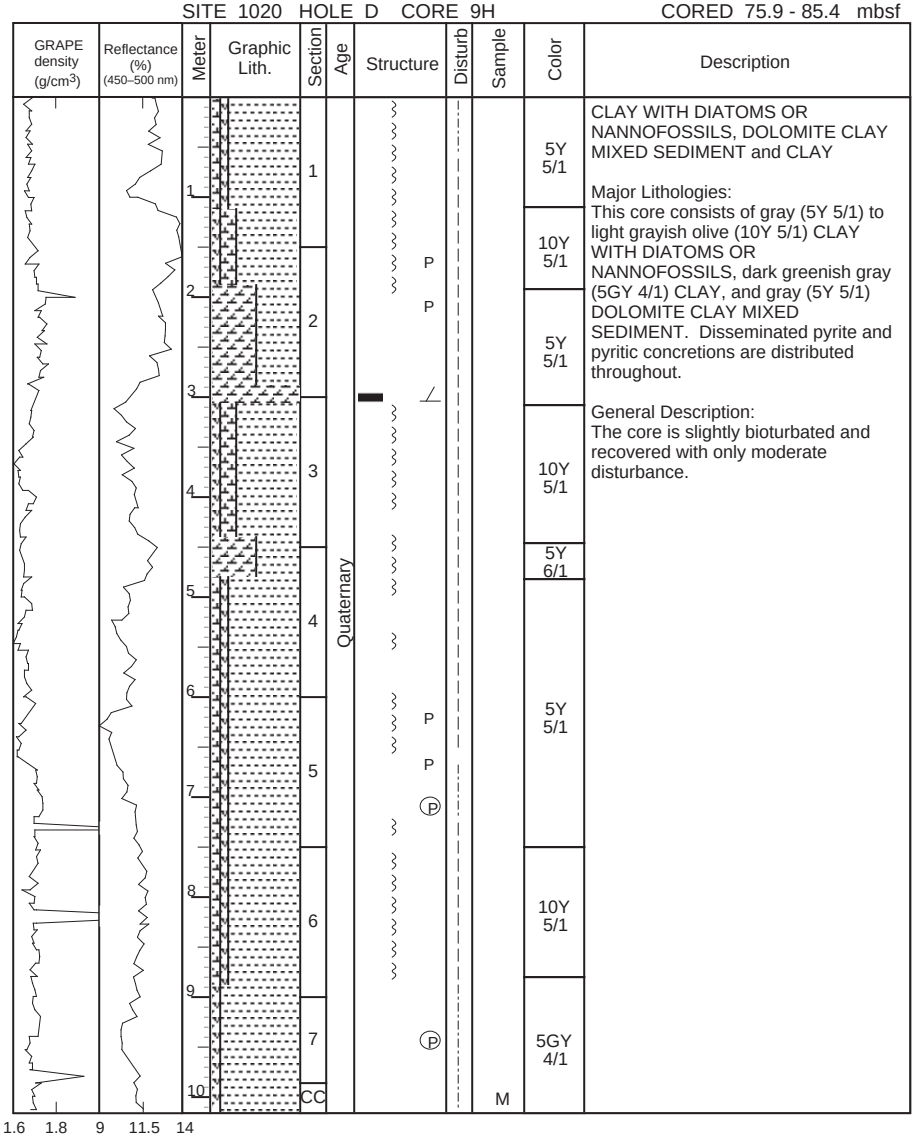
Major Lithology:
This core consists of light grayish olive to pale olive (10Y 5/1 to 10Y 6/1) NANNOFOSSIL CLAY. Color changes gradationally and is mottled throughout the core.

Minor Lithologies:
A thin layer of laminated dark gray (N3) FINE SAND occurs in Section CC, 24-29 cm.

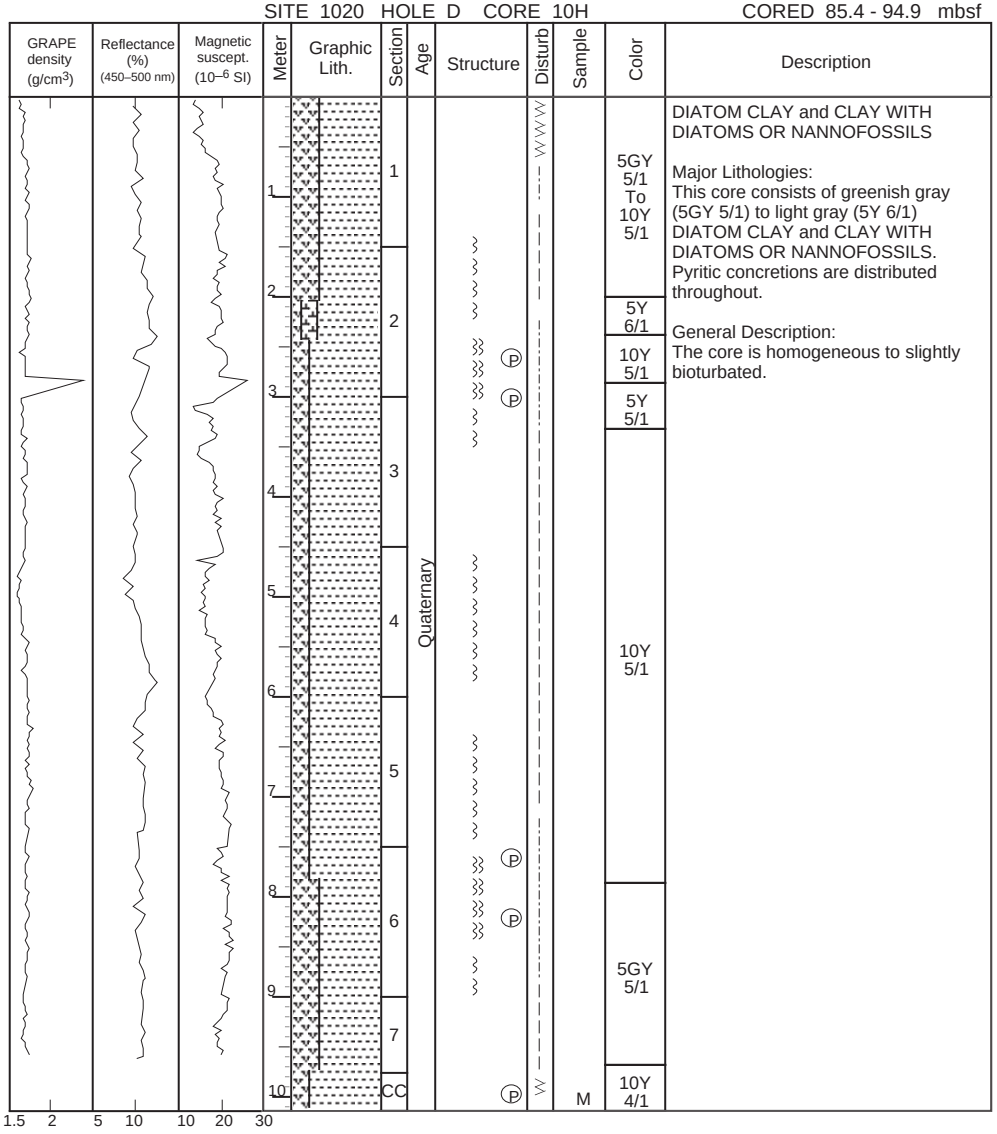
General Description:
The sediment is moderately to heavily bioturbated throughout most of the core but decreases near the base.


SITE 1020 HOLE D CORE 8H CORED 66.4 - 75.9 mbsf
GRAPE density (g/cm3)
Reflectance (%) (450–500 nm)
Magnetic suscept. (10–6 SI)
Meter
Graphic Lith.
Section
Age
Structure
Disturb
Sample
Color
Description
Quaternary
10Y 4/2
5Y 5/2
10Y 4/2
5Y 5/2
10Y 4/2
CLAY WITH NANNOFOSSILS and NANNOFOSSIL CLAY
Major Lithologies:
This core consists of grayish olive (10Y 4/2) NANNOFOSSIL CLAY and olive gray (5Y 5/2) CLAY WITH NANNOFOSSILS. Color changes are subtle and gradational. Small (0.5 cm) pyrite nodules occur throughout the core.
Minor Lithologies:
Section 1, 30-38 cm, contains a graded bed of fine SAND.
General Description:
The sediment is moderately bioturbated.

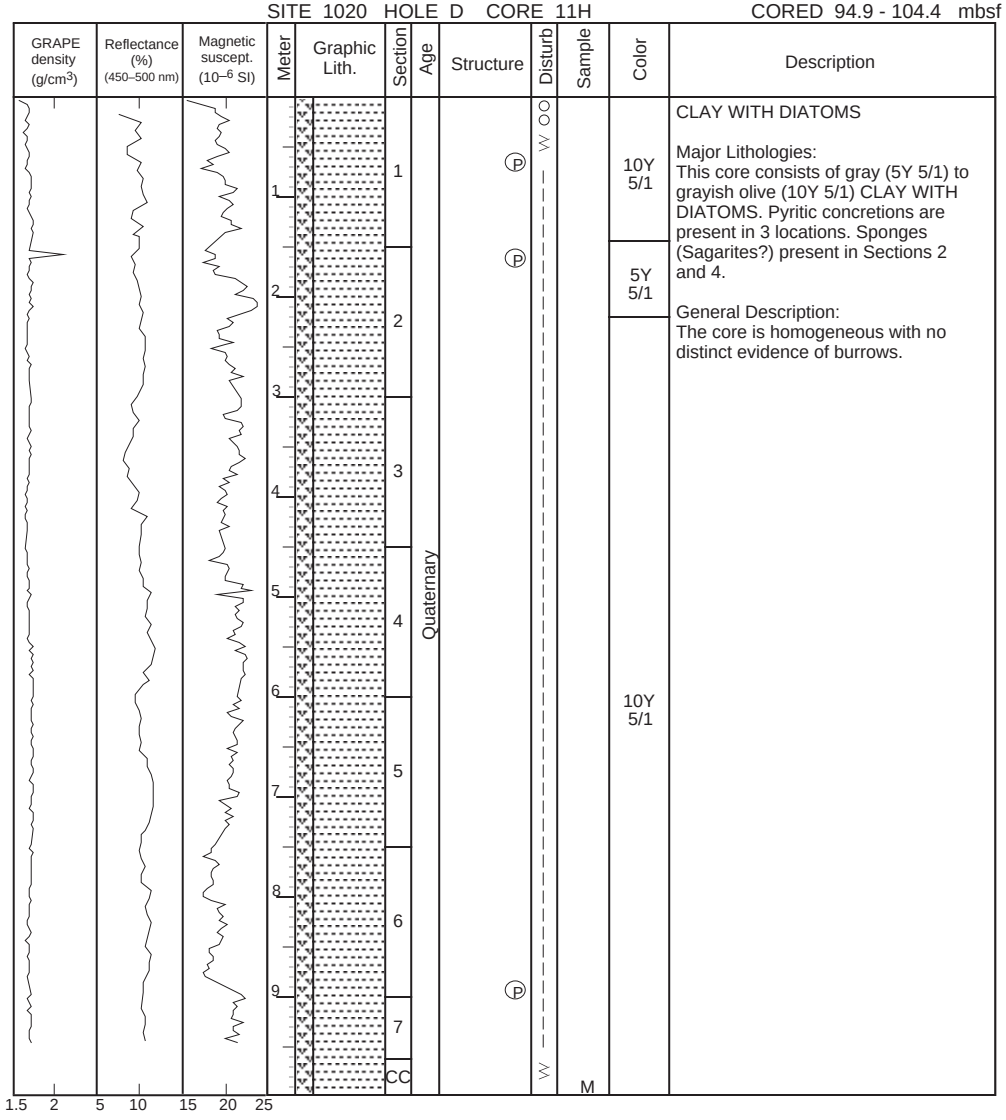
SITE 1020 HOLE D CORE 9H CORED 75.9 - 85.4 mbsf



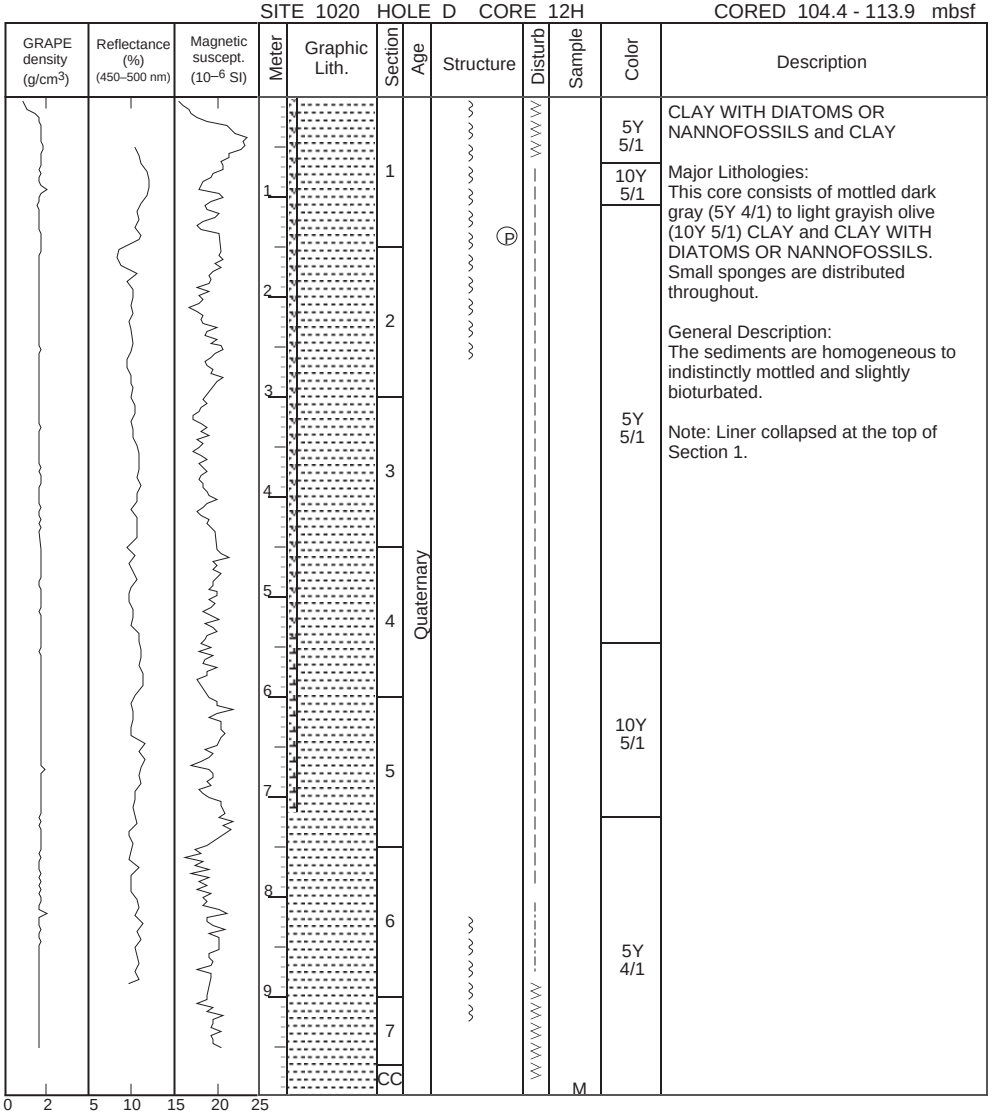
SITE 1020 HOLE D CORE 10H CORED 85.4 - 94.9 mbsf



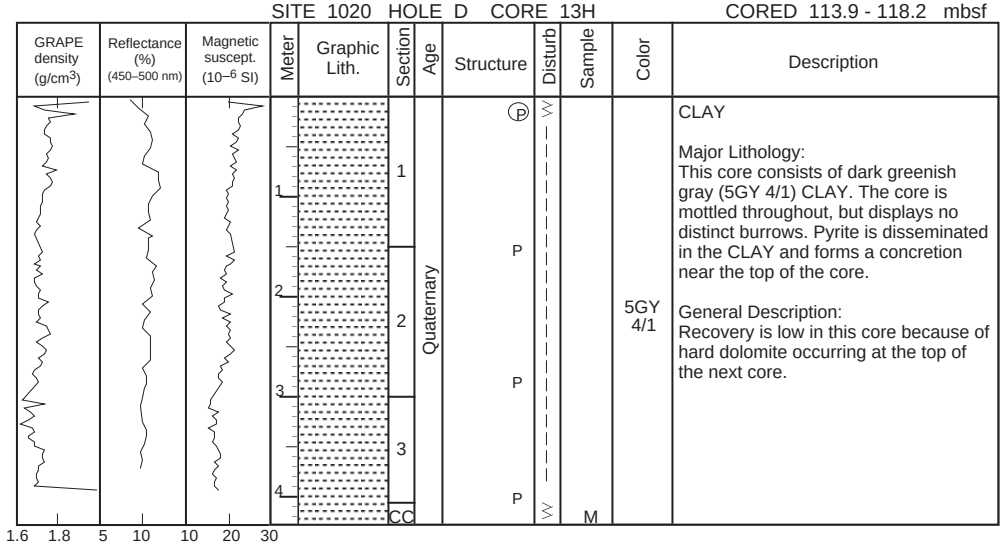
SITE 1020 HOLE D CORE 11H CORED 94.9 - 104.4 mbsf



SITE 1020 HOLE D CORE 12H CORED 104.4 - 113.9 mbsf



SITE 1020 HOLE D CORE 13H CORED 113.9 - 118.2 mbsf

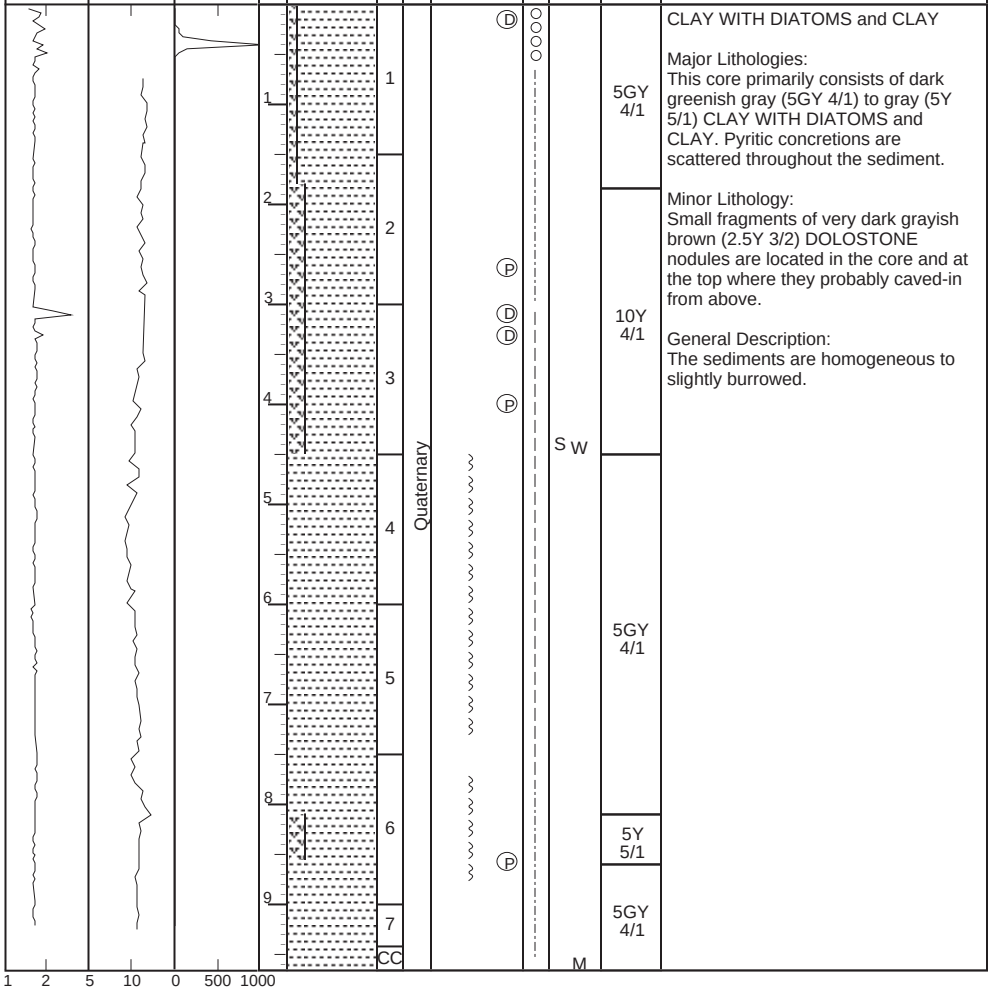


CLAY

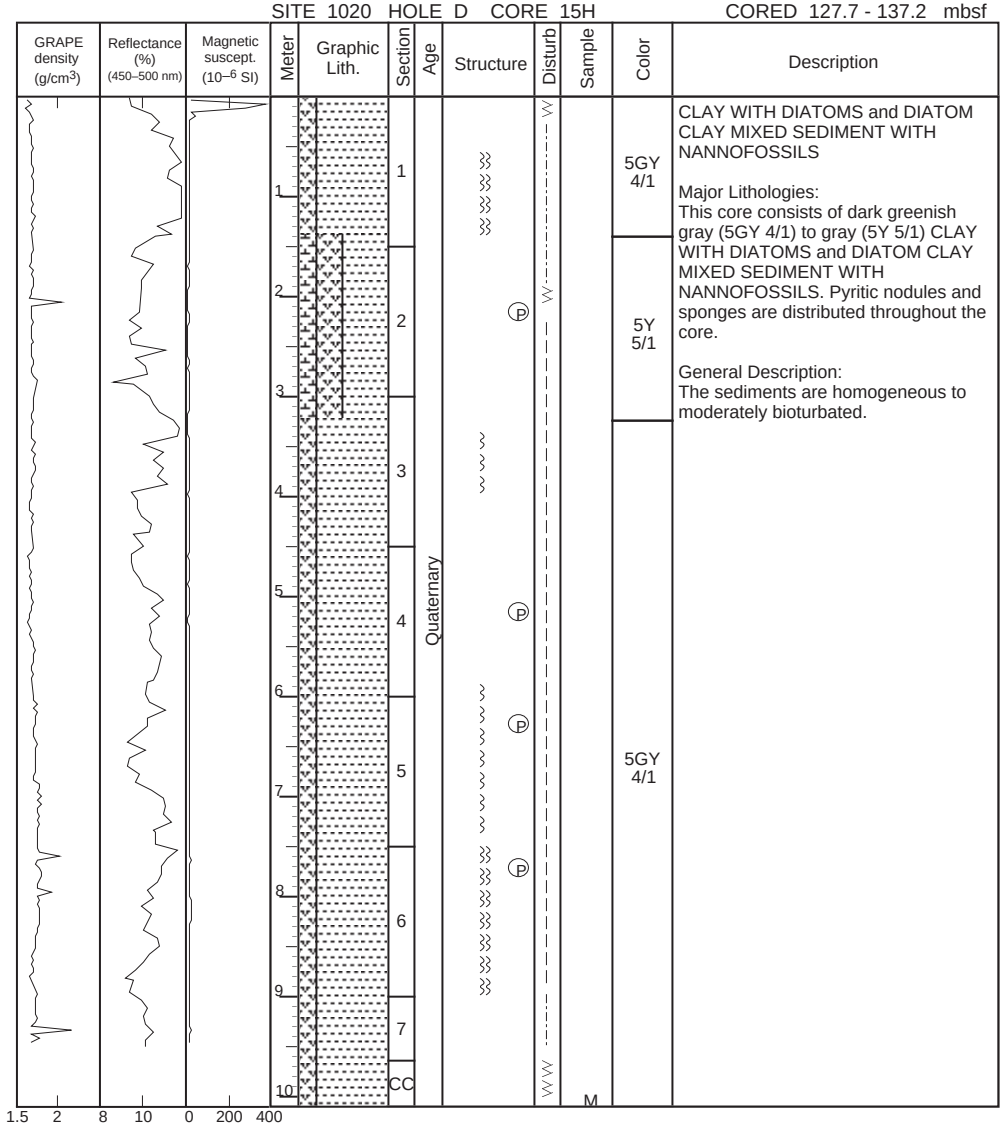
Major Lithology:
This core consists of dark greenish gray (5GY 4/1) CLAY. The core is mottled throughout, but displays no distinct burrows. Pyrite is disseminated in the CLAY and forms a concretion near the top of the core.

General Description:
Recovery is low in this core because of hard dolomite occurring at the top of the next core.

SITE 1020 HOLE D CORE 14H CORED 118.2 - 127.7 mbsf



SITE 1020 HOLE D CORE 15H CORED 127.7 - 137.2 mbsf

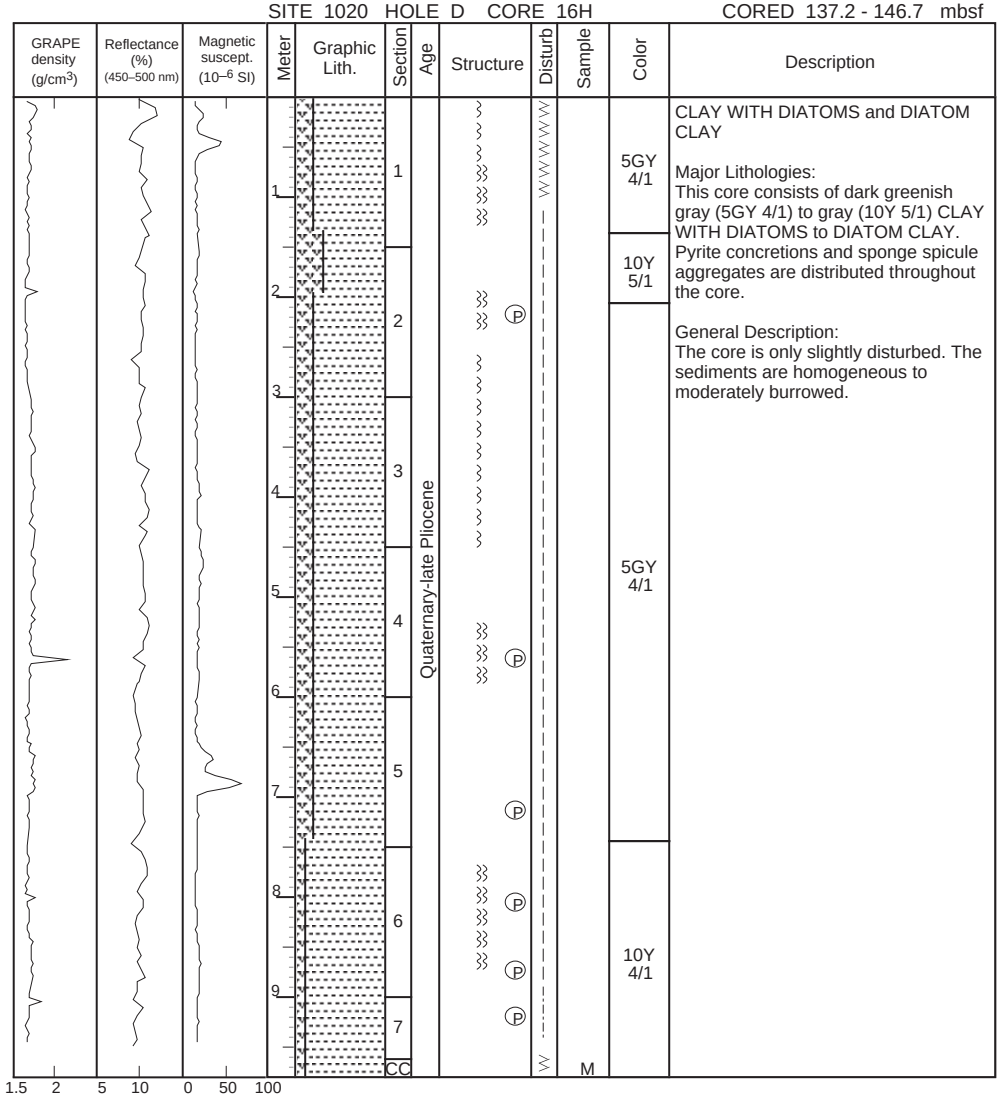


CLAY WITH DIATOMS and DIATOM CLAY MIXED SEDIMENT WITH NANNOFOSSILS

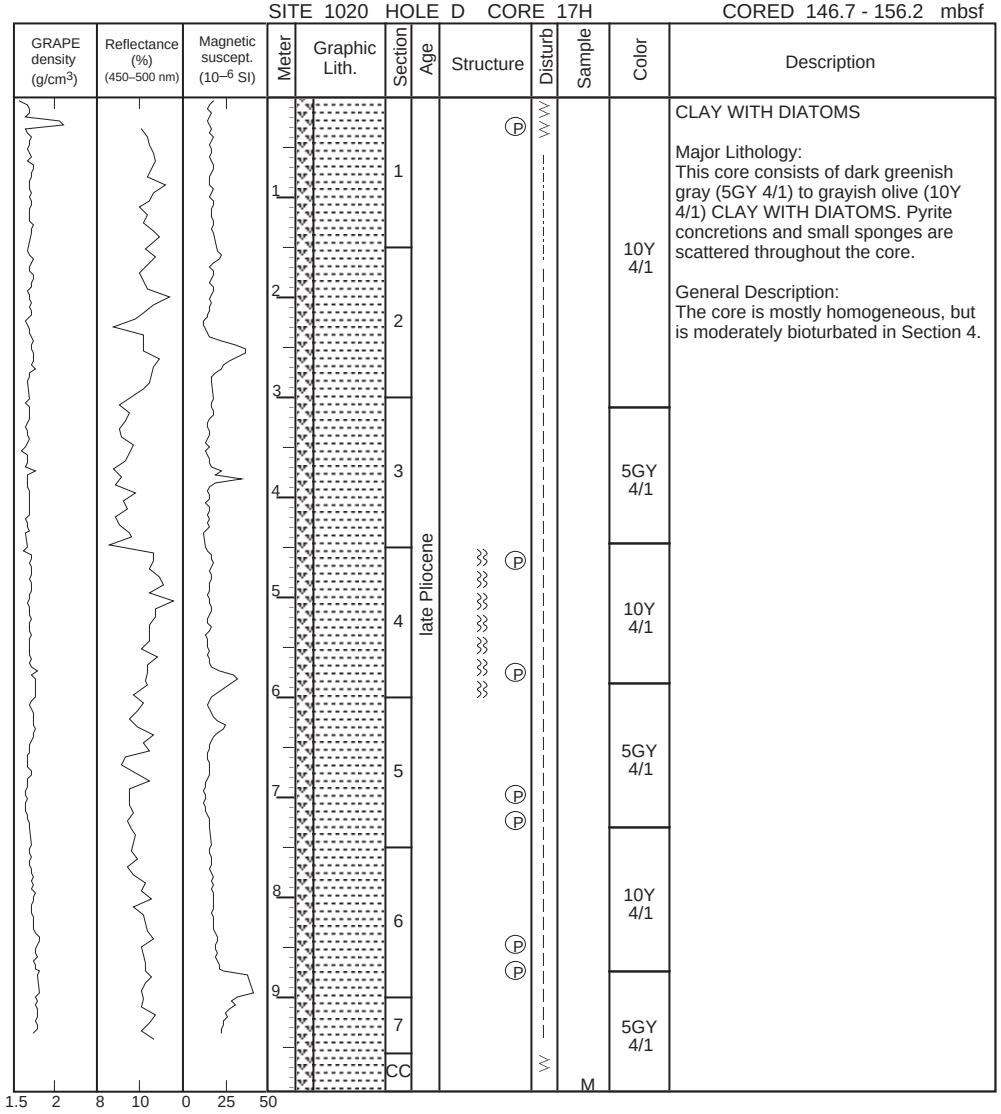
Major Lithologies:
This core consists of dark greenish gray (5GY 4/1) to gray (5Y 5/1) CLAY WITH DIATOMS and DIATOM CLAY MIXED SEDIMENT WITH NANNOFOSSILS. Pyritic nodules and sponges are distributed throughout the core.

General Description:
The sediments are homogeneous to moderately bioturbated.

SITE 1020 HOLE D CORE 16H CORED 137.2 - 146.7 mbsf



SITE 1020 HOLE D CORE 17H CORED 146.7 - 156.2 mbsf

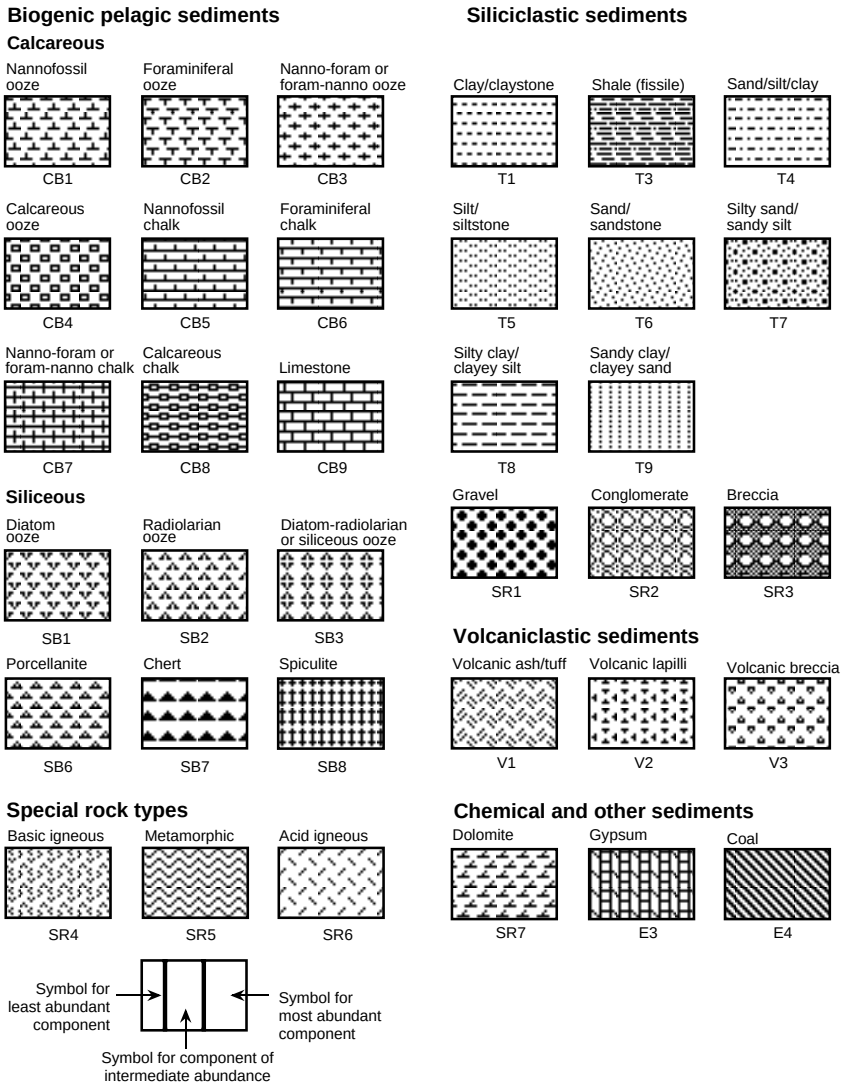


CLAY WITH DIATOMS

Major Lithology:
This core consists of dark greenish gray (5GY 4/1) to grayish olive (10Y 4/1) CLAY WITH DIATOMS. Pyrite concretions and small sponges are scattered throughout the core.

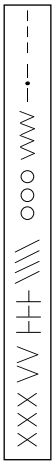
General Description:
The core is mostly homogeneous, but is moderately bioturbated in Section 4.

Key to symbols used in the “Graphic Lithology” column on the core description sheets.



Key to symbols used in the "Structures" column on the core description sheets.

Drilling disturbance symbols



Soft sediments

- Slightly disturbed
- Moderately disturbed
- Highly disturbed
- Soupy

Hard sediments

- Slightly fractured
- Moderately fractured
- Highly fragmented
- Drilling breccia

Sedimentary structures

- Burrows, rare (<30% surface area)
- Burrows, common (30%–60% surface area)
- Burrows, abundant (>60% surface area)
- Discrete *Zoophycos* trace fossil
- Discrete *Chondrites* trace fossil
- *Sagarites* sponge
- Gastropods
- Other bivalves
- Shell fragments
- Wood framents
- Fish debris

Sedimentary structures cont.

- Fining-upward sequence
- Interval over which primary sedimentary structure occur
- Planar laminae
- Wedge-planar laminae/beds
- Graded bedding (normal)
- Graded bedding (reversed)
- Sharp contact
- Gradational contact
- Scoured, sharp contact
- Scoured contact with graded bed
- Thick color bands (sharp contact)
- Thick color bands (gradational contact)
- Medium color bands (sharp contact)
- Medium color bands (gradational contact)
- Thin color bands (sharp contact)
- Thin color bands (gradational contact)
- Laminations (mm scale)
- Individual thick color band
- Individual medium color band
- Individual thin color band
- Individual lamination
- Wavy lamination
- Cross laminae
- Cross stratification
- Cross bedding
- Convoluted/contorted bedding
- Flaser bedding
- Graded interval, normal
- Veins
- Water escape structure
- Scour

- Isolated pebbles/cobbles
- Isolated mud clasts
- Slump blocks or slump folds
- Contorted slump
- Probable compaction fracture
- Microfault (normal)
- Microfault (thrust)
- Macrofault
- Fracture
- Totally fractured
- Vein structures
- Color mottles
- Dolomite nodule/concretion
- D — Disseminated dolomite
- P — Pyrite nodule/concretion
- P — Disseminated pyrite
- G — Glauconite
- Concretions/nodules
- Ba — Barite nodule/concretion
- Ba — Disseminated barite
- Ca — Calcite nodule/concretion
- C — Carbonate nodule/concretion
- Ch — Chert nodule/concretion
- A — Ash/pumice pods
- A — Ash layer